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Editorials

IN THE UNITED STATES THERE IS NO WANTON SLAUGHTER OF MOTHERS AND OF CHILDREN IN CHILDBIRTH

One of the commonest fallacisms fed to the public by the proponents of Sheppard-Towner type of medical control advocates is that under the current state of existence in the United States there is a wanton slaughter of mothers and of children in childbirth.

Statisticians know that any figures can be made to lie. And in the entire field of economic arithmetic probably nothing numerical is so sadly distorted for selfish aims of fanatic socialists as the figures of maternity mortality.

At stated periods some flagrantly misleading and sensational yarn appears to the effect that "the United States takes better care of its brood stock than of its mothers," and "that more mothers are lost in childbirth in the United States than anywhere else in the world," etc., etc.

The indicated panacea for all of this alleged woe is invariably the corollary to the complaint and as invariably shouts from the mountain tops that the way to save mothers and children is by maternity legislation that will afford a lot of jobs to political appointees and add a lot of taxes to the daily burden of the average citizen.

A periodic flood of maternity mortality figures is engulfing us again. It must be remembered that

1. There is no accurate system of comparative mortality figures in maternity cases.

2. Complicating causes of death are subjected to a great variation of analysis in every country.

3. Where maternity cases are involved standards of living and personal as well as community sanitation plays an important part.

4. Even in the deepest days of the depression living standards for Americans were and are

higher than in any other country in the world.

5. Unfortunately the printed word, whether truthful or mendacious, is only too often taken too seriously by the credulous and the semi-ignorant, especially in those matters pertaining to health, and most especially in those health matters involving the reproductive system and the mechanism of creation and birth and in the widely functioning machinery for the distribution of misleading information *the lay managed, lay edited and lay circulated health magazine is one of the most malicious of instruments.*

Half a century ago the poet laureate of England, Alfred Tennyson, wrote, "A lie that is all a lie, may be met and fought with, outright. But a lie that is half a truth is a harder matter to fight." So when a health periodical, with reputable physicians on its staff sets forth error in maternity mortality findings the case is both sad and serious.

Better Health, a bimonthly periodical published at San Francisco, is culpable in its editorial in the issue of April, 1933, with its semi-scientific background and its socialistic utterances that come under the heading of partial veracity.

Wailing the jeremiad of "The Tragic Sacrifice of Mothers" the editorial sets forth tables of comparison and absolutely evades the fact that medical statisticians of repute all over the world admit that there is no universal standard yardstick or any other standardized unit of measure for maternity mortality. Where these statistics are concerned the actuary is worse off than he is when he contemplates the currency situation, past, present and future.

Some of the statements in this editorial to which exception must be taken most strongly are:

> These facts are that our country, so remarkable in its development of the means for producing material things, stands twenty-second—practically at the bottom—among civilized countries in the number per thousand of its mothers who die in childbirth; and that 10,000 of the 16,000 mothers who die annually, if given proper care, *need not die.* Each year, 10,000 American women are allowed to perish for lack of proper care. If this care were provided, it is further estimated that not only would the mothers be saved but in addition, 30,000 of the 100,000 babies who now die in the first month of life, would live. Dr. Louis I. Dublin, internationally known statistical expert of the Metropolitan Life Insurance Company, who prepared the above estimates on the basis of the records of the Maternity Center Association, concludes: "There is nothing peculiar to the civilization of the United States to account for the fact that our maternal death rate is more than twice that of such countries as Denmark and the Netherlands. . . . We have allowed things to go on with indifferences to the waste of lives of mothers and babies. The situation cries to high heaven for a remedy." It is further amazing to note that besides those nations that Dr. Dublin mentions, five others, Italy, Japan, Hungary, Uruguay and Finland, have maternal death rates *less than half* that of the United States.
>
> Specifically, to mention only some of the nations which take better care of their mothers than does the United States, the death rate of mothers per 1,000 births in Italy is 2.6, in Japan 2.8, the Netherlands 2.9, Hungary 3.0, Spain 3.9, England and Wales 4.1, Irish Free State 4.5, Northern Ireland 4.8, Canada 5.6, Scotland 6.4. and the United States 6.5.
>
> That this high death rate of mothers in our country can be controlled, has been proved by the work of those who have a new conception of Mother's Day. Certain organizations working among mothers have reduced the death rate to 2.2 per thousand live births as against the 6.5 in the country as a whole. To accomplish this, skilled care from the very first intimation of pregnancy until the baby is at least six weeks old, is what is needed. Besides the saving of the mothers' lives, still-births were 42 per cent lower among the women receiving intensive care and infant deaths in the first month of life were reduced in the same circumstances 32 per cent.

Unfortunately for the socialistic theorists, this information does not stand up on its own premise.

What looks to the casual eye like negligent American inefficiency would more truly be termed efficient American conscientiousness.

Take for example an Oriental nation like the Japanese where the deathrate is cited at 2.8 per 1,000. Anyone familiar with obstetrics as practiced in a traditionalized and ancient country such as the land of the Mikado with its oriental attitude towards woman, the rights of her body and the trivial estimation in which female infants are held, the frequency with which the female child is regarded as a curse and as a burden, knows even if it is not an acknowledged fact, the impossibility of accurate comparative maternity mortality. In Oriental countries generally, though Japan's progress is a thing to marvel at, the slave system is far from obsolete.

England is a safer country to deal with on maternity mortality comparative statistics. Yet there is a closer relation between these two countries as England is reported with a 4.1 as

against the United States 6.5. Now this 4.1 per cent includes only England and Wales. Going further into British incidences and adding to this 4.1 these other

	4.1
Irish Free State	4.5
Northern Ireland	4.8
Scotland	6.4
Canada	5.6
5)	25.4
	5.1

It is observed that the English figure might better be 5.09999 and when it comes to a question of maternity supervision, let it be noted that Uruguay which this authority says has a rate of about 3.2%, has a large Indian population with whom statistics are as unruly and foreign an item as the etiquette of a formal levee. To compare there must be a standard of comparison or figures are worthless as are these.

Sir Arthur Newsholme, native of Great Britain and international authority as well as accepted master of actuarial skill, frankly admits the lack of international standardized methods of computation for maternity mortality.

Some few tables that were evolved indicated plainly that statement was entirely false that tried to show that the United States stands in the seventeenth or even in the fifteenth place where a low maternal death rate is concerned.

International comparative standing of any country in regard to maternal death rates cannot be secured with any accuracy until the same system of compilation and elimination of cause and complication is established. For example, the United States Census Bureau will not allow physicians in the United States to follow the English plan of elimination of puerperal deaths in vital statistics, yet Newsholme shows by his process how the death rate in England for one year was reduced from 5.46 to 4.12 per thousand.

Back of all this socialist propaganda is the risen ghost of the iniquitous Sheppard-Towner bill, the favorite puppet of the Children's Bureau of the Department of Labor. Never in all its existence has this group contacted a more successful marionette to pull rich, tax supported jobs out of the burdened citizen than through this system of yowling about help for neglected mothers and children. It is a great set-up. Some day the truth of it will all come out as truth and murder do. When that occurs, the credulous public will see that it is not so-called "Slaughter" of mothers of which the nation should stand accused but rather of self-slaughter by socialism and by pseudo charity.

MICHIGAN STATE MEDICAL SOCIETY SURVEYS MEDICAL SERVICES AND HEALTH AGENCIES

Distribution of medical care in Michigan is subjected to exhaustive analysis by the Michigan State Medical society through the services of a special committee appointed in accordance with a resolution adopted by the House of Delegates of the state society in session at Pontiac, Mich., during September, 1931.

The report was two years in compilation. As submitted to the 1933 session of the society these findings form a volume of some 200 pages with supplementary charts and indices.

What Michigan medical men have found out about themselves and medicine as it is practiced in Michigan may not be a matter of identical exactitude as to conditions elsewhere. That this information is, however, more or less analogous is certain without a doubt. The two major recommendations made to the Michigan committee at the time it began its work were:

1. That the committee be made a permanent one and that it engage in a comprehensive survey of the medical needs of the state and the available means of meeting these needs:

2. That each county medical society create a committee on public relations to study local problems and to gather data that might lead to their solution.

Such a course was followed. Dr. Nathan Sinai, of the University of Michigan, was appointed director of study. Dr. W. H. Marshall of Flint, Mich., was made chairman of the officiating committee of six.

The summary of the committee's report states a desire to:

"Point out the merits and defects of the existing conditions so that these will stand out clearly both with relation to each other and to conditions as a whole." "Further to present a logical sequence of facts from which logical solution of problems may emerge and win ac-

ceptance by the public and the profession."

The committee considers that research, which has tended to improve medical science, is also one of the chief causes of current complexities working to an opposite result from the findings of research in industry, in that research in medicine acts to decrease rather than to increase the availability of complete medical service to the average purchaser. Further that a birdseye view of the medical system as a whole "gives the impression of a tremendous expansion taking place within an inelastic circle."

And that "the processes of new growth, cleaving and expansion have resulted in overcrowding, friction and dissatisfaction within the circle. The problem is to create a new and larger circle."

PERHAPS!

At any rate the sum total of the summary states that the "major problems and programs facing the public in Michigan are:

"1. Continued study and preparation for meeting immediate needs in the distribution of medical service.

"2. Distribution of the burden of costs to the end that adequate medical care may be provided for all of the people.

"3. A more equitable arrangement for the care of the indigent sick.

"4. Need for better distribution of medical facilities in the sparsely settled rural areas.

"5. Wider distribution and a better co-ordination of public health activities."

It can be seen that this committee would seem to have proceeded no further along than the great mass of individual thinking physicians as to the "flaws in the circle"; in fact from some of the recommendations even perhaps not quite so far. For instance on page 171 of the report in the subsection "Chapter 12, Conclusions and Recommendations," the statement is set forth,—

"The recommendations of the committee are as follows:

"1. That the House of Delegates *approve the principle of health insurance.*

"2. That the Committee on Medical Economics be directed to prepare and present, for the approval of the House of Delegates, a plan or plans for health insurance: provided, however, that such a plan or plans shall be based upon the following policies:

"(a) Free choice of physicians by the insured;

"(b) The limitation of benefits to those of medical service;

"(c) The control of medical service benefits by the profession;

"(d) The exclusion of individuals or organizations that might engage in health insurance for profit."

All of which is calculated to so whitewash the "principle of health insurance" so that this menacing wolf of the medical profession might, in a dark night and by a crew of blind men, be *almost* mistaken for a sheep.

When it comes to any theoretical ideas about health insurance it will pay the medical profession again to reconsider Patrick Henry—"I have but one lamp by which my feet are guided and that is the lamp of experience."

Even such fluid amendments of feeble performance but loud promise such as the committee recommends will not put any so-called "principle of health insurance" in good standing with that percentage of the profession which retains sanity of perspective. European experience with health insurance both in "principle" and in performance is to-day a stench in the nostrils.

As to medical care of indigents and an equalization of "rich" patients of whom the report comments "the number is too small to make equalization possible" the "committee therefore recommends:

"1. That the community and the medical profession undertake the medical care of the indigent as a joint responsibility;

"2. That the costs of medical care for the indigent be met through a contribution of funds by the community and a partial contribution of services by the medical profession;

"3. That the community funds must be used *to compensate in part* the physicians for services rendered to indigents and that such compensation be in proportion to the amount of service provided;

"4. That the community centralize in a single agency the social and economic appraisal of the individual's or family's right to such medical service;

"5. That local committees on medical economics institute studies and develop plans in accordance with the above recommendations;

"6. That the state committee on medical economics collect and analyze data pertaining to the costs of medical care for indigents and plans for providing service and that these data be made available to local committees."

It will be noted that nothing in these recommendations for the medical care of indigents takes drastic stand against the chance of *Lay Interference* for which an excellent loophole is left in the statement "that the *community centralize in one agency* the social and economic appraisal of the individual's or family's right to such medical service."

Further the term is used "community funds," which in the line of experience can be recruited only by tax levies or by such donations from wealthy philanthropists as would tend to bring expenditure of such funds completely under lay control. A tax levy would hit the medical profession as to date doctors are not tax exempt. The doctors would be worse off than before.

Relative to the problem of the subvention of medical service the "committee recommends that:

"1. The house of delegates approve the principle of subvention through state or local funds to assure reasonably adequate medical care for residents in the sparsely settled areas and reasonably adequate incomes and facilities for medical personnel."

"(Here it will be noted is another chance to sock the taxpayer. 'State or local funds' are simply tax levies—nothing more. *A tax levy on those who can be taxed is the socialist's idea of paradise.)*

"2. That the committee on medical economics institute local detailed studies to determine the need for medical personnel and facilities in such areas."

As to the question of public health service the "committee recommends that:

"1. The county be established as the basic unit of public health administration including school health administration and that the jurisdiction and activities of the county health department extend to all cities in the county."

If that isn't a loaded joker, what is?

"This recommendation is intended to place the health department in a position to correlate all health activities of a public nature in the county."

The next two recommendations are simply routine form recommendations as to the consolidation of counties into districts as is now a purely Michigan law and then comes recommendation number four which is "That counties be assisted in the financing of health departments *by state funds.*"

As to the scope of the much discussed hospital of the University of Michigan, the report reads: "In its consideration of the place of the University hospital in the scheme of medical care, the committee views this institution not as an entity but as a related cog in the system.

"Hence if an orderly development results from the recommendations already made it is felt that most of the causes of friction and misunderstanding will be removed. Therefore the committee recommends as follows:

"1. That the University adopt a policy which will lead to a restriction of those activities of the hospital to those efforts directed toward medical education;

"2. That the committee on medical economics of the Michigan State Medical society request the appointment of a committee to prepare a plan to effect this policy as early as is compatible with public welfare."

As to group practice, the statement is made that "the committee feels that it has insufficient data upon which to base a judgment concerning the merits or defects of group practice. This form of practice is not well defined since it may include anything from a rather loose agreement between two or three physicians to a huge organization of personnel and facilities." "The committee feels that at this time, the question of group practice is secondary to the items already presented."

From this cursory epitome of the conclusions of the Michigan committee, the average practitioner is apt to voice as his own idea, "Can any good come out of Nazareth?"

Painstaking indeed is this detailed report. It touches upon everything from Michigan geology and history to the low average income of high grade physicians. But in all this wealth of mind and matter two principles seem to have been made subservient to expediency and these are that medicine is a matter for medical men, in its practice, its economics and its control, and that the source of state and

community funds is the ancient evil of heavy taxation.

"Health insurance" is one of the high sounding levers with which tax levies are raised. From any angle and all angles health insurance in its current interpretation is a socialistic gouge.

About the worst thing that could be said of this report has been said by the reporters themselves. For the committee stands condemned out of its own mouth in the direct and decisive statement:

"We recommend that the House of Delegates of the Michigan State Medical society approve of the principle of Health Insurance."

And not all of the fine phraseology pro and con in the report directly preceding this statement, can make one iota of difference.

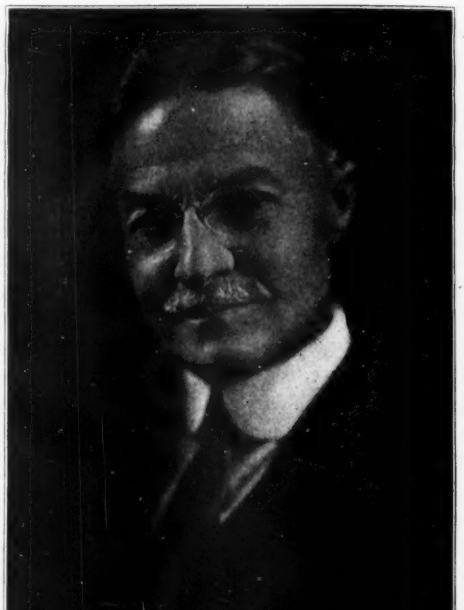
DOCTOR OHLS WITH THE ILLINOIS MEDICAL JOURNAL TWENTY-FIVE YEARS

The ILLINOIS MEDICAL JOURNAL was but a gangling juvenile of ten years' existence when Henry Garnsey Ohls, Ph.B., M.D., first took a hand in its upbringing and direction. That was twenty-five years ago. This is the silver anniversary of Dr. Ohls' connection with what has become an outstanding contemporary medical periodical.

It is plain and unvarnished veracity, to state that this silver anniversary is the pinnacle of a pyramid of twenty-five years of sterling service beaten into shape from the shining integrity, sterling qualities and solid wisdom of a man who is a philosopher of parts as well as a philosophic physician.

Dr. Ohls is one of these "born-in-Chicago-and-proud-of-it" citizens. Born in Chicago "before the great fire of 1871," he passed a happy and comfortably environed boyhood in Hinsdale. The local schools all knew him. But whether they loved him or not is less a matter of record than that all reminiscences of "Harry" Ohls stress his unselfish, loyal, overly modest disposition and his kindly outlook upon life as well as his gentlemanly attitude towards even the most untoward complications.

Dr. Ohls received the degree of bachelor of philosophy from the University of Michigan in 1883. Among his other undergraduate performances was to share in the founding of the student publication, "The Michigan Argonaut", and to serve on the first board of directors. His work there stood him in good stead when he stepped into his job with the ILLINOIS MEDICAL JOURNAL. An "original Argonaut," he is still seeking the "golden fleece." Though as with most of the medical profession this mythical wool still evades him, Dr. Ohls has helped in more than one instance to shear off the sheepskin from many a socialistic wolf masquerading as a lamb in the grand parade of current socialistic propaganda.



HENRY GARNSEY OHLS, Ph. B., M.D.

This program of medical efficiency by the official organ of the medical profession in Illinois, and in which Dr. Ohls' judgment has been of such import and value, has lifted The ILLINOIS MEDICAL JOURNAL from state to national prominence, in the fight to save the medical profession, and the practice of medicine, and in fact the nation itself from the enroachments of socialism and communism. Dr. Ohls has been practically in the thick of this fight since the day he began on the editorial staff

of the Journal. He came in as assistant to Dr. George Edwin Baxter who was managing editor while Dr. George N. Kreider of Springfield was editor-in-chief. The membership of The Illinois State Medical Society was then but a fraction of what it is to-day. The Journal itself was only forty per cent of its present size and with only one third the number of its present pages, printed then but one column to the page.

Naturally enough, the changes of twenty-five years are numerous and varied, and a bit startling. There have been almost as many changes in Dr. Ohls as in the Journal, but underlying principles in both remain the same.

Never since the day in 1887 that Harry Ohls walked off with a sheepskin from Rush Medical College has the physician submerged the philosopher. That marvelous mental asset has carried Dr. Ohls through the obstacles of the years beginning with his youthful assistantship to Walter S. Haines, professor of chemistry, three subsequent years of practice in Clinton, Iowa, postgraduate work at Chicago Policlinic where he recalled with gratitude and great benefit his special class work at Cook County hospital under the late Dr. John B. Murphy, his seven years' work from 1893 to 1900 as assistant to Prof. E. Fletcher Ingals, his four succeeding years of practice at Odell, Ill., and his association in 1905 with the American Medical Association. That same year Dr. Ohls joined the staff of the Chicago Department of Health where, since 1925, he has been assistant chief of the bureau of vital statistics.

Joining the staff of the ILLINOIS MEDICAL JOURNAL in 1909, since 1913 Dr. Ohls has been its managing editor. In between times among other things, for several years, Dr. Ohls aided Dr. Ingals in the editing of the nose and throat section of the American Year Book of Medicine and Surgery.

Above all, Dr. Ohls has never failed to be a good citizen, friend and neighbor as well as a ruthless crusader for what he thinks the right and the justice of life. Whatever else his liabilities, Henry Garnsey Ohls, Ph.B., M.D., refuses emphatically to join in even surface worship to false gods and money changers in the practice of medicine. The ILLINOIS MEDICAL JOURNAL is to be congratulated upon its possession of Dr. Ohls.

CHICAGO TO BE WORLD MEDICAL CENTER

The opening of the Cook County School of Medicine, in affiliation with the Cook County Hospital, meets the great need of more than a half century in medical education in this country. It is the hope of the faculty that in giving to the medical profession the opportunity of graduate study in an ideal environment under expert supervision and with the almost unlimited facilities of the Cook County Hospital, it is satisfying demands placed upon the doctor by a modern civilization with its advancement in medical science.

The faculty of the school includes the Attending Staff of the Cook County Hospital. The faculty is convinced that only upon the foundation of a thorough medical and surgical training can one build the superstructure of a successful medical career. The early knowledge acquired from the fundamentals in medicine must be reinforced by a substantial training such as can be realized only when opportunity is offered for the repeated study of a large amount of clinical material. It is the purpose of the Cook County Graduate School of Medicine by its affiliation with the Cook County Hospital with its 3300 beds to offer such a study of all classes of medical and surgical cases.

The school recently completed an intensive course in pediatrics given to a group of Michigan Doctors sponsored by the Kellogg Foundation of Battle Creek, Michigan. These doctors are the medical advisors to the indigent children of the State of Michigan whose medical care is provided for by the Kellogg Foundation. The course was arranged by Dr. Maurice Blatt, Chief of Staff of Children's Division of Cook County Hospital. The course included the following subjects: Endocrine Disturbances, Childhood Tuberculosis, Preventive Medicine, Laboratory Diagnosis, X-ray Diagnosis, Rheumatic Infections, Allergic Testing, the Acute Abdomen, Spinal Fluid, Blood Chemistry, Care of Newborn, Allergic Manifestations, Diseases of the Lungs, Surgical Diagnosis, Orthopedic Diagnosis, Diseases of Metabolism, Rheumatic Heart, Pathological Conferences, Contagious Diseases, G. I. Disorders in older children, Electrocardiography, Nursing Dietetics, Mental Hygiene, the Role

of Vitamines in Disease, Fractures, Pediatric Procedures, Neurology, Common Eye Diseases, Disorders of Nose and Throat, Skin, Gonorrhea and Syphilis, Pathologic Feeders and Infant Feeding. The lectures and presentations were given by all members of the Attending Staff of the Children's Hospital including such well known pediatricians as Dr. Julius Hess, Dr. Karl A. Meyer, Medical Superintendent of Cook County Hospital, Dr. R. W. McNealy, Dr. Philip Lewin, members of Surgical Staff of Cook County Hospital; Dr. Wm. F. Monereiff, Chief of Eye Department, Dr. Samuel Pearlman of Ear, Nose & Throat Department, Dr. Max Wien of Department of Dermatology; and Dr. Richard Jaffe, Chief Pathologist of the Hospital, participated in the course.

The School offers continuous informal and intensive courses in all branches of Medicine, General Surgery, Obstetrics, Gynecology, Ear, Nose and Throat, Ophthalmology, Urology, Cystoscopy, Dermatology and Syphilis, Physical Therapy, Anatomy, Pathology, X-ray, Laboratory Technique and Fractures. The courses are given by all members of the Attending Staff of the Cook County Hospital which comprises the Teaching Faculty of the School. The administrative affairs of the School are directed by a Board of Trustees consisting of the following members: Dr. Karl A. Meyer, Dr. R. W. McNealy, Dr. Philip Kreuscher, Dr. Frederick Tice, Dr. Wm. F. Monereiff, Dr. Aaron Arkin, Dr. Richard Jaffe, and Dr. T. C. Galloway.

During recent months the Cook County Graduate School of Medicine has given courses to doctors from all parts of the United States, Canada, South America, Hawaii and the Philippine Islands.

THE ECONOMIC PLIGHT OF DOCTORS AND HOSPITALS

The economic plight of doctors and of hospitals is arousing their respective clientele as well as statisticians and economists.

In Great Britain, which has led the world into the slump and up again, the hospital situation became so very acute that the state made a grant of five hundred thousand pounds for the continuance of voluntary hospitals.

It is expected, too, that physicians' incomes will be about the last to rally from the consequences of economic depression.

What will be the result?

Will medical care and medical men be put upon state and federal payrolls bringing the guardians of the health of the nation into the same status as those who guard it against crime and fire hazard—the police and the firemen?

The question has already been raised in more than one community.

Already 110 voluntary hospitals have had to suspend.

Some rational plan of financing for both hospitals and the profession would seem to be of imminent necessity.

CALIFORNIA LAW REGULATES CLINICS

Nowadays if anybody wants to start a clinic in California he must get out and show that such service is needed by the community for which the clinic is planned.

It may not be amiss to print a few excerpts from California's clinic law:

Excerpts from the law follow:

Sec. 1. A clinic and dispensary is defined to be a place, establishment or institution maintained, conducted and operated by a person, firm, association or corporation (a) for the purpose of furnishing at such establishment or institution, without charge or for part pay or full pay, advice, diagnosis, treatment, medicines, etc., to any person or persons afflicted with bodily or mental diseases or injuries, or (b) except in the case of governmental health officers or school employers performing the duties of their office for the purpose of advising and informing persons of means and measures to prevent or avoid disease or injury.

Sec. 2. It shall be unlawful for any person, firm, association or corporation to maintain, conduct or operate any clinic and dispensary as herein defined within the State of California, whether termed or called a clinic or dispensary or health center or by any other designation of like import, in violation of the provisions of this act, or without first obtaining a permit from the State Board of Public Health as hereinafter provided.

Sec. 3. Clinics and dispensaries shall be of five classes as follows: (1) Charitable; (2) teaching and research; (3) employer's; (4) private pay; and (5) governmental.

Sec. 4. No corporation other than a charitable, benevolent or educational corporation shall conduct, maintain, or operate charitable or teaching and research clinics and dispensaries, and no person or firm or association shall conduct or operate charitable or teaching

and research clinics and dispensaries except for benevolent, charitable or educational purposes; no employer shall conduct or operate an employer's clinic and dispensary for profit; no private pay clinic licensed under the laws of the State of California to practice medicine or surgery or dentistry or osteopathy or chiropractic or drugless healing.

Sec. 5. All applications for conducting and operating a clinic and dispensary of any class shall be made in writing to the State Board of Public Health for a permit thereof. The application shall contain the following; name or names, address of applicant, establishment or institution in which the clinic and dispensary is to be maintained, conducted or operated; names and addresses of those operating same; the class of clinic and dispensary; the names and addresses of the professional licentiate or licentiates responsible for the maintenance of the same; kind and nature of advice and treatment given or to be given therein; description of building, including location, facilities, equipment, apparatus and appliances to be furnished; sources of funds and income; amount of the administrative or other charges to be made against patients and (except in the case of private pay clinics and dispensaries), the schedule of fees to be charged patients; and such additional information as the Director of Public Health and State Board of Pubiic Health shall require. Said application shall be verified before an officer of the State of California authorized to administer oaths by the person or a member of the firm or association or an officer of the corporation making the application. Application for permit must be made annually by every person, firm or corporation maintaining, conducting and operating a clinic and dispensary other than the United States of America or any department, official or agency thereof.

Sec. 6. Upon the filing of any such application, it shall be the duty of the Director of Public Health to make or cause to be made diligent inquiry and investigate into the facts set forth in said application and if he shall find that the statements and representations contained in such application are true and that the establishment or the continued maintenance, conduct and operation of such clinic and dispensary is in conformity with the intent and purpose of this act and that there is need for such clinic and dispensary in the community in which it is or is proposed to be maintained, conducted and operated, and that the establishment or the continued maintenance, conduct and operation thereof is for the benefit of the public health, he shall so report to the State Board of Public Health and the board shall issue such permit or cause such permit to be issued. In the event that it shall not within three months after the filing of application thereof, issue or cause to be issued such permit, it shall state the grounds and reasons for such refusal thereof in writing, furnishing a copy thereof to the applicant.

The Director of Public Health is hereby authorized and empowered at any time to visit, enter, examine and inspect either personally or through a duly authorized agent the premises occupied, maintained and conducted by any clinic and dispensary, and examine all matters in relation thereto. The State Board of Public Health may designate any city, city and county, or county health officer its agent for the purpose of this section. After due notice to a clinic and dispensary and reasonable opportunity for it to be heard, the State Board of Public Health may, if it shall appear that such clinic and dispensary has violated the provisions of this act, revoke the permit of such clinic and dispensary by written order. Such an order shall state the grounds and reasons for revoking such permit and the time at which such revocation shall take effect and such order shall be subject to review by the superior court in and for the county or city and county in which the clinic and dispensary is situate.

Sec. 7. The Director of Public Health shall annually compile a list of the clinics and dispensaries maintained, conducted and operated by the United States of America, or any department of official or agency thereof within the State of California, and a record showing the address at which each of said clinics and dispensaries is situate, the department of official or agency of the United States maintaining, conducting and operating the clinic, the purpose thereof, and such additional or any other obtainable information in regard thereto as the Director of Public Health or the State Board of Public Health shall require of the other classes of clinics and dispensaries pursuant thereto by any rule or regulation adopted under the provisions hereof.

Sec. 8. The State Board of Public Health is hereby authorized and empowered to make from time to time such reasonable rules and regulations for the maintenance, conduct and operation of clinics and dispensaries in order to provide therein adequate facilities, equipment and appliances, the attendance and services of duly qualified licensed practitioners of the healing art, to secure sufficient information showing the necessity, basis and method of appealing to the public for funds for the support thereof, to avoid unnecessary or wasteful duplication of services, to show the need of the community, or of the persons proposed to be advised or treated for the service rendered or proposed to be rendered, and to regulate the purposes and objects for which said funds are applied and to amend or repeal any thereof.

Sec. 9. Said permits shall contain at least the following: the name and address of the clinic and dispensary; the names with addresses of the owners of the clinic and dispensary; the name or names and addresses of the persons charged with the management, conduct and operation of the clinic; the class of clinic and dispensary licensed to be operated thereunder; and the year covered by the permit. All permits shall be signed or countersigned by the Director of Public Health. All clinics and dispensaries and the several classes thereof as herein specified other than governmental clinics and dispensaries shall pay prior to the issuance of permit thereto an annual permit fee in the sum of not less than five (5) dollars and not more than twenty-five (25) dollars to the State Board of Public Health.

Sec. 11. Every clinic or dispensary holding a permit shall on or before the fifteenth day of February of each year file with the State Board of Public Health upon forms to be furnished by the board, a verified report stating (a) the number of patients treated, (b) aggregate amount of administration or other charges or fees collected from said patients, (c) total amount of money or property received for the support, maintenance or operation of said clinic and dispensary, and (d) such other information and data as the State Board of Public Health shall require. The State Board of Public Health shall prepare and file an annual report of the clinics and dispensaries holding permits granted, and said report shall be printed and published at least once a year and distributed at the cost of printing thereof by the State Board of Public Health.

Sec. 12. Any person, firm, association or corporation who maintains or conducts or operates or assists in maintaining or conducting or operating any clinic and dispensary as herein defined and without having complied with the provisions of this act, or any rule or regulation herein provided for, shall be guilty of a misdemeanor and upon conviction shall be punished by imprisonment in the county jail for not more than six months or by a fine not to exceed $500 or both such fine and imprisonment.

LORD SAVE THE EDITOR FROM SUCH A FATE

The editor of the *Indiana Medical Journal*, July issue, comments editorially on some of the problems of the editor of a medical journal as follows:

One of the chiefest joys in the life of a medical editor lies in reading the letters that come in after every issue. The letters we enjoy most are those having to do with some editorial contribution written by another, particularly when the letter in question is of a most critical nature. The editor does not write all the editorials nor all the editorial notes—Lord, save him from such a fate! As was said in the first issue of The Journal, under the present regime, we solicit material of every sort from our general membership. It is our province to edit such material and to determine whether it shall be used, how and when. When we use a contribution from one who is presumed to be an authority on the subject under discussion, then get "bawled out" for the opinions therein expressed, it gives us much pleasure to refer the matter to the author and let him go to it with his critic. Occasionally the ensuing battle is of the hammer-and-tongs variety, all of which pleases us greatly. We get plenty of criticism, directly applied, and to have some one else take some of it is quite in order.

MEETING OF THE COUNTIES COMPRISING THE FIFTH COUNCILOR DISTRICT

The counties comprising the fifth councilor district will have a meeting with the Sangamon County Medical Society at Springfield, October 5. Dinner at 6 p. m., Leland Hotel.

The guest speaker will be Dr. Ralph Pemberton, associate Professor of Medicine, University of Pennsylvania and chairman of the American committee for the Control of Rheumatism.

The title of the speaker's address will be *"The Control of Rheumatism."*

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ILLINOIS MEDICAL JOURNAL
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PREVENTABLE INVALIDISM FOLLOWING CHILDBIRTH

According to JENNINGS C. LITZENBERG, Minneapolis (*Journal A. M. A.*, Nov. 19, 1932), the ultimate welfare of the parturient woman cannot be secured by good antepartum and intrapartum care alone but requires equally good postpartum attention. Meticulous care is necessary during the lying-in period, and careful examination is essential at the end of it to detect and correct any abnormalities. Care consists of prevention of hemorrhage at delivery and the discovery and treatment of anemia post partum. Toxemias must be followed to the complete eradication of all conditions which may lead to chronic nephritis. Displacements of the uterus must be corrected, for a large percentage can be cured. All infections must be followed to complete cure and elimination of chronic sequelae as far as is possible. Reexamination must be made at the end of the intermediate puerperium to discover recurrence or occurrence of abnormal conditions. Observation must be continued until the mother is restored to perfect health, however long that may require. If adequate postpartum care is not carried to its ultimate conclusion, the consequences may be grave anemia, general ill health, nephritis, permanent displacement of the uterus, grave cardiac lesions, neurosis, psychosis, chronic cervicitis, cancer and death.

Correspondence

THE MURDERERS OF DOCTOR GARNITZ SENTENCED TO A TERM OF ONE HUNDRED YEARS EACH.

On Monday, August 14th, Matthew Novak, Charles Kubala and Joseph Borowy entered a plea of guilty to the charge of murdering Dr. B. F. Garnitz in an attempted holdup on February 24, 1933.

After hearing the evidence, Judge Benjamin Epstein sentenced each defendant to a term of one hundred years in the penitentiary. Through the holdup of physicians answering fake sick calls at night, the physicians were becoming so skeptical of night calls that people were suffering because of their inability to secure medical attention. Judge Epstein's decision assures the medical profession and the public that their common interests will be protected.

The people of Cook County are to be congratulated on having elected as one of their judges a man with the legal ability, the moral courage and sense of justice of Benjamin Epstein.

We publicly express the appreciation of the members of the Chicago Medical Society to Judge Epstein.

THOMAS P. FOLEY, Secretary.

C. M. S. B.

THE MEDICAL PROFESSION AWAKENS FROM ITS LETHARGY

Chicago, Ill.
July 24, 1933

Permit me to congratulate you again upon your editorial in the July issue of the Journal, wherein you again call attention to the multiplicities of the inimitable situation that confronts the doctors, and which is consonant with your ideas and policies as long as I have followed you.

Meantime, I wish to call your attention to the fact that on page fifty of the Chicago Medical Society bulletin you will find that Gabriel is actually tooting his horn, . . . The Evanston branch has finally awakened to the fact that it is not *infra-dig* actually to discuss economic problems at their meetings. In fact, you will now find that this article states that, "economic problems have demanded a large proportion of time at the meetings . . . Notable in this respect was the meeting on the cost of medical care . . . attended by 200 physicians and guests, probably the largest number of physicians that have ever attended any single meeting of this society."

This is phenomenal and is highly instructive, because, when the Evanston branch of the Chicago Medical Society has become such a convert to discussing actually the problem of the practitioner being able to make enough money to pay his bills, it is second only to the American Revolution, and, of equal importance, even though deprived of its Boston Tea Party.

A persistent comer in the mail of all physicians is "Medical Economics," and, the July issue of that contains an article on "How long can the profession overlook this challenge?" by Dr. H. Sheridan Baketel. I think that this "challenge" is particularly apropos. All of these things are in line with your masterful editorial. I merely want to reiterate that your article provoked considerable comment. I think you have heard from some of them already. However, the important thing is the medical profession being an active, aggressive and constructive programme.

What do you think of the idea of getting together a group of the leading thinkers in medicine with the idea of formulating an outline of this plan? You have so much knowledge and so many contacts that I believe that you could put these ideas and all of this force into action. It must be well thought out, basically sound and with every safeguard necessary to guarantee justice both to the laity and to the profession. There are hundreds of other physicians who will also respond to a call to arms. I also believe that there should be lay representation in our final set-up of a programme for mutual benefit for the profession and the laity.

It is high time to start and who could make a better beginning? A. M. M.

TUBERCULOUS PATIENTS IN GENERAL HOSPITALS

Miami, Fla.

To the Editor: In the August, 1933, number of the ILLINOIS MEDICAL JOURNAL (page 105) appears an editorial putting forth the question; if general hospital care should not be extended to the unfortunate tuberculous individual, the

general hospital to open its doors and allow these patients to come in for either observation, care or treatment. This paper is quite interesting, appeals to the humanitarian spirit; is however, open to much criticism.

There is no doubt that every director of the general hospital, every member of the medical staff, every interne, every nurse, would be more than willing to cooperate with any agency which would place the tuberculous patient into the spare, into the unoccupied beds of a general hospital but how about the feelings, the sentiment of the good patients of the general hospital, the people who defray the expenses of running, of maintaining, the upkeep of the hospital?

A good hospital, with a capacity of about 150 beds, finds that only 70%, at the best time, of the beds are occupied, and is more than willing to assign the other 30% to the tuberculous. But try and fill these spare 30% beds with tuberculous patients, and you will find a steady increase of empty beds; for every spare bed that you will fill with a tuberculous person two beds will be vacated by the general hospital patients—there will be a general exodus and the empty bed capacity will become gradually greater.

There is not a private hospital in any part of our country which would not permit the tuberculous patient to come into the wards as a bed occupant, if it were not for the apprehensions of the general public who are too imbued with the thought that the doctor is simply spreading this dreaded menace and when a tuberculosis specialist constantly speaks about a tuberculosis menace, what different conclusions can the general reader infer—he who is a patient at a private hospital and he finally concludes that the doctor must be a great hero to cope with this dreadful menace, tuberculosis.

Dr. Goldberg puts the cart before the horse. Any good hospital may become the asylum for the tuberculous if first you can educate the general public to the fact, and a great fact it is, that this disease, tuberculosis, is, after all, not so great a menace to society, that the healthy person can not contract this disease by speaking, by shaking hands, or associating in a general way with an active tuberculous person. Further, the doctor states that *many* of the tuberculous patients can afford to pay. Perhaps nearer the truth if he had stated that a *few* of the tuberculous patients could pay. Take a private tuberculosis Sanatorium and see how many patients are there who themselves pay for the services which they receive. In making inquiries you will learn that but few pay for their upkeep, that usually a brother or a sister, an uncle or an aunt, a fraternal lodge or a life insurance defray the necessary expense. If however, this pay should stop then the poor unfortunate tuberculous individual seeks shelter in a free City, County or State Sanatorium.

Properly cared for the tuberculous individual is not a menace to the hospital population and he can be admitted without detriment to hospital routine or hospital patients. This paragraph embraces much truth, but how about its application? And we read on—do everything possible to minimize or eliminate that menace and every open case of tuberculosis is a potential community menace. The tuberculous individual reads this, that he is a menace and says: So I am a menace to my family, to my friends, to my neighbors. The patient occupying a bed in a general hospital, a non-tuberculous individual, reads that the doctor has said that the tuberculous person is a potential menace to his neighbors. Now, does any sane person believe that this patient, now in the general hospital, occupying a bed, wants this menace to occupy an adjacent bed or live in the hospital under the same roof?

My belief, to bring about a better, a more secure feeling between the tuberculous and the non-tuberculous individual, is more enlightenment, more truth about this disease. Eliminate the horrid and vulgar word "menace" from your vocabulary. Allay the inborn, the unnatural fear, convince the public that tuberculosis, after all, with ordinary care, is not so dangerous a disease, is neither infectious nor contagious to adults; eliminate the fear which ignorant people have inculcated into the minds of the public, give to the public a better understanding, concerning tuberculosis and perhaps its sister disease, leprosy; then and only then will we be able to admit the unfortunate patient to the care and treatment in the general hospital.

In the Municipal Tuberculosis Sanitarium at the present moment there are about 1,000 tuberculous patients in all stages, in every condition

of the disease, and we have never been apprized that in the last 15 years of its existence that a non-tuberculous attendant, nurse or physician, contracted tuberculosis; so after all, tuberculosis is not so great a menace.

In the married state, in which usually the most intimate relationship nearly always exists, tuberculosis of both husband and wife at one and the same time is very infrequent; here the percentage is estimated at about 2. With how many cases does the physician doing tuberculosis work become acquainted where both the husband and the wife are sickened with the disease at the same time? Now, more than that, and this is quite interesting. If at any time the actively tuberculous member be called away, either in death or being placed into a tuberculosis Sanatorium, the remaining member, although undoubtedly infected, perhaps already slightly tuberculously diseased, heals out, is spontaneously cured; this is due to the oft repeated slight infection and a gradual immunization; all this goes to prove that after all, tuberculosis is not so great a menace in adult life.

The statement made by the doctor that research in tuberculosis is lagging is misleading, is a misstatement. Secure a copy of an abstract of the papers read at the 29th Annual Tuberculosis Meeting at Toronto, Canada, in June last and see if this interest is lagging. This was the 29th meeting of our Association and for one who has attended at least 20 of these annual meetings, I can only vouch for the steadily increasing interest and progress in tuberculosis research. This meeting was a most enthusiastic gathering of men and women interested in the tuberculosis problem—there seems to be no lagging in this field.

Apropos. Throughout the mentioned paper appear a few words which may need correction. The word "Sanatorium" appears 19 times and the word "Sanitarium" but twice. If the latter two refer to an institution for the care of tuberculous patients, then the words are incorrectly used. When and how to use one or the other—consult any Standard Dictionary. For instance, the larger institution for the care of the tuberculous in your City is known as the Municipal Tuberculosis Sanatorium. Here the word Sanitarium was written into the bill permitting the community to erect such an institution at the time it was presented before the Legislature in Springfield for passage. After its passage it was not deemed advisable, by its promotors, to make the change from Sanitarium to Sanatorium—owing to the fact that the change might affect the bill as it stood. Another word is—tubercular and tuberculous—the former appears seven times. If this word refers to an individual who is suffering from tuberculosis then the word is wrongfully applied and in its place the adjective "tuberculous" should be used.

2370 S. W. 23 Terrace

JOHN RITTER, M.D.

INTERNATIONAL ASSEMBLY OF THE INTERSTATE POST-GRADUATE MEDICAL ASSOCITION OF NORTH AMERICA

CLEVELAND, OHIO.

OCTOBER 16, 17, 10, 19 AND 20, 1933

Monday, October 16, 8 A. M.

Diagnostic Clinic: "Gastric and Duodenal Ulcer,"
Dr. Waltman Walters, Associate Professor of Surgery, University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, Minn.

Diagnostic Clinic: "Jaundice,"
Dr. Harlow Brooks, Emeritus Professor of Clinical Medicine, New York University and Bellevue Hospital Medical College, and Attending Physician, Fourth Medical Service, Bellevue Hospital, New York, N. Y.

Diagnostic Clinic: "Vesical Calculi,"
Dr. Hugh H. Young, Clinical Professor of Urology, Johns Hopkins University School of Medicine, Baltimore, Md.

Intermission for Review of Exhibits

Diagnostic Clinic: (Subject to be announced),
Dr. Charles H. Frazier, John Rhea Barton Professor of Surgery, University of Pennsylvania School of Medicine, Philadelphia, Pa.

Diagnostic Clinic: "Colitis,"
Dr. James H. Means, Jackson Professor of Clinical Medicine, Harvard University Medical School, and Chief of the Medical Services, Massachusetts General Hospital, Boston, Mass.

Diagnostic Clinic: "Extra-Abdominal Conditions Simulating Intra-Abdominal Lesions,"
Dr. John M. T. Finney, Professor of Clinical Surgery, Johns Hopkins University School of Medicine, Baltimore, Md.

Noon Intermission

1:00 P.M.

Diagnostic Clinic: "Rickets,"
Dr. Alan Brown, Professor, Diseases of Children, University of Toronto Faculty of Medicine, and Physician-in-Chief, Hospital for Sick Children. Toronto, Canada.

Address: "Acute Rheumatic Fever,"
Dr. Harlow Brooks, New York, N. Y.
Address: "Cancer of the Stomach,"
Dr. Waltman Walters, Rochester, Minn.
Address: "Maligant Tumors of the Bladder,"
Dr. Hugh H. Young, Baltimore, Md.

Intermission for Review of Exhibits

Address: "Blood Dyscrasias Including the Schilling Count with Special Reference to the Specialties in Medicine,"
Dr. William Egbert Robertson, Visiting Chief, Department of Medicine, Philadelphia General Hospital, Philadelphia, Pa.
Address: "Surgery of the Pituitary Body,"
Dr. Charles H. Frazier, Philadelphia, Pa.
Address: "Relation of the Endocrine Glands to Circulatory Diseases,"
Dr. James H. Means, Boston, Mass.
Address: "Hernia,"
Dr. John M. T. Finney, Baltimore, Md.

Dinner Intermission

7:00 P.M.

Address: "Prevention of Neonatal Mortality,"
Dr. Alan Brown, Toronto, Canada.
Address: "Diagnosis of Brain Tumors,"
Dr. Walter E. Dandy, Adjunct Professor of Neurological Surgery, Johns Hopkins University School of Medicine, Baltimore, Md.
Address: "The Choice of Anesthetic Methods,"
Dr. Arthur Dean Bevan, Chairman of the Department of Surgery, Rush Medical College of the University of Chicago, Chicago, Ill.
Address: "The Periodic Health Examination,"
Dr. Charles A. Elliott, Professor of Medicine, Northwestern University School of Medicine, Chicago, Illinois.
Address: "Cancer of the Colon,"
Dr. Fred W. Rankin, Lexington, Ky.

Tuesday, October 17, 8 A. M.

Diagnostic Clinic: "Diseases of the Gall-Bladder,"
Dr. E. Starr Judd, Professor of Surgery, University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Diagnostic Clinic: "Cirrhosis of the Liver,"
Dr. Cyrus C. Sturgis, Professor of Internal Medicine; Director, Thomas Henry Simpson Memorial Institute for Medical Research, University of Michigan, Ann Arbor, Michigan.
Diagnostic Clinic: "Menorrhagia and Metrorrhagia."
Dr. P. Brooke Bland, Professor of Obstetrics, Jefferson Medical College of Philadelphia, Philadelphia, Pa.

Intermission for Review of Exhibits

Diagnostic Clinic: "Coronary Thrombosis and Angina Pectoris,"
Dr. R. W. Scott, Professor of Clinical Medicine, Western Reserve University School of Medicine, Cleveland, Ohio.
Diagnostic Clinic: "Tuberculosis of the Urinary Tract,"
Dr. Hugh Cabot, Prof. of Surgery, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Diagnostic Clinic: "Suppurative Diseases of the Chest,"
Dr. George P. Muller, Professor of Clinical Surgery, Graduate School of Medicine, University of Pennsylvania; Surgeon, Lankenau and Misericordia Hospitals, Philadelphia, Pa.

Noon Intermission

1:00 P.M.

Diagnostic Clinic: "Metabolism in Pregnancy,"
Dr. Otto H. Schwarz, Professor of Obstetrics and Gynecology, Washington University School of Medicine, St. Louis, Mo.
Address: "Megacolon,"
Dr. E. Starr Judd, Rochester, Minn.
Address: "Differential Diagnosis and Treatment of Anemia,"
Dr. Cyrus C. Sturgis, Ann Arbor, Mich.
Address: "Cancer of the Uterus."
Dr. P. Brooke Bland, Philadelphia, Pa.

Intermission for Review of Exhibits

Address: "Clinical Aspects of Arteriosclerosis,"
Dr. R. W. Scott, Cleveland, Ohio.
Address: "Management of Bilateral and Recurrent Ureteral and Kidney Stones,"
Dr. Hugh Cabot, Rochester, Minn.
Address: "Appendicitis,"
Dr. George P. Muller, Philadelphia, Pa.
Address: "Chronic Subinvolution, Its Pathology, Treatment and Prevention,"
Dr. Otto H. Schwarz, St. Louis, Mo.

Dinner Intermission

7:00 P.M.

Address: "Recent Advances in the Knowledge of Endocrine Diseases,"
Dr. Leonard G. Rowntree, Director of the Philadelphia Institute for Medical Research; Research Clinician to the Philadelphia General Hospital, Philadelphia, Pa.
Address: "Diagnosis and Treatment of Bronchiectasis,"
Dr. Arthur C. Christie, Professor of Roentgenology, George Washington University Medical School, Washington, D. C.
Address: "Cancer of the Larynx,"
Dr. Gordon B. New, Professor of Oto-Rhino-Laryngology, University of Minnesota, Graduate School of Medicine, Mayo Clinic, Rochester, Minn.
Address: "The Association of Eye Changes with General Diseases,"
(Speaker to be Selected)

Wednesday, October 18, 8 A. M.

Diagnostic Clinic: "Diseases of the Spleen—Leukemia."
Dr. Warfield T. Longcope, Professor of Medicine, Johns Hopkins University School of Medicine, Baltimore, Md.

Diagnostic Clinic: "Inoperable and Recurrent Carcinoma of the Breast,"
Dr. Burton J. Lee, Professor of Clinical Surgery, Cornell University Medical College; and Clinical Director of Memorial Hospital, New York, N. Y.
Diagnostic Clinic: "Medical Conditions Simulating Surgical Conditions of the Upper Abdomen,"
Dr. Frederick J. Kalteyer, Clinical Professor of Medicine, Jefferson Medical College of Philadelphia, Philadelphia, Pa.

Intermission for Review of Exhibits

Diagnostic Clinic: "Nephritis in Children,"
Dr. W. McKim Marriott, Professor of Pediatrics and Dean, Washington University School of Medicine, St. Louis, Mo.
Diagnostic Clinic: "Gall-Stones and Cholecystitis,"
Dr. Frank H. Lahey, Lahey Clinic, Boston, Mass.
Diagnostic Clinic: "Tic Douloureux,"
Dr. Howard C. Naffziger, Professor of Surgery, University of California Medical School, San Francisco, Calif.

Noon Intermission

1:00 P. M.

Diagnostic Clinic: "Ileus,"
Dr. Irvin Abell, Clinical Professor of Surgery, University of Louisville School of Medicine, Louisville, Ky.
Address: "Allergic Diseases,"
Dr. Warfield T. Longcope, Baltimore, Md.
Address: "Drug, Neurotic and Self-Induced Eruptions" (Lantern Slide Demonstration),
Dr. Frank C. Knowles, Professor of Dermatology, Jefferson Medical College of Philadelphia, Philadelphia, Pa.
Address: "Surgical Treatment of Angina Pectoris,"
Dr. Elliott C. Cutler, Moseley Professor of Surgery, Harvard University Medical School, Boston, Mass.

Intermission for Review of Exhibits

Address: "Differential Diagnosis of Gall-Bladder Diseases from the Roentgenological Standpoint,"
Dr. Bernard H. Nichols, Head of the Department of Radiology, Cleveland Clinic, Cleveland, Ohio.
Address: "Sweat Gland Carcinoma of the Breast,"
Dr. Burton J. Lee, New York, N. Y.
Address: "The Diagnostic Value of the Respiratory Rate as a Sign in Differentiating Acute Pulmonary Disease from Acute Abdominal Disease,"
Dr. Frederick J. Kalteyer, Philadelphia, Pa.
Address: "Regeneration of the Liver,"
Dr. Charles H. Mayo, Associate Chief of Staff of the Mayo Clinic, Rochester, Minn.; Professor of Surgery, Medical School, University of Minnesota; Professor of Surgery, Graduate School, University of Minnesota (The Mayo Foundation).

Dinner Intermission

7:00 P. M.

Address: "Special Points in the Feeding of Children with Special Relation to Dentition and Growth,"
Dr. W. McKim Marriott, St. Louis, Mo.
Address: "Intrathoracic Goiter,"
Dr. Frank H. Lahey, Boston, Mass.
Address: "The Diagnosis of Spinal Cord Tumors,"
Dr. Howard C. Naffziger, San Francisco, Calif.
Address: "Preoperative and Postoperative Management in Abdominal Surgery,"
Dr. Irvin Abell, Louisville, Ky.
Address: "Problems of Cardiac Failure,"
Dr. Joseph T. Wearn, Professor of Medicine, Western Reserve University School of Medicine, Cleveland, Ohio.

Thursday, October 19, 8 A. M.

Diagnostic Clinic: "Psychoses of Different Age Periods,"
Dr. Louis J. Karnosh, Assistant Clinical Professor of Nervous Diseases, Western Reserve University School of Medicine, Cleveland, Ohio.
Diagnostic Clinic: (Subject to be announced),
Dr. Dean D. Lewis, Professor of Surgery, Johns Hopkins University School of Medicine, Baltimore, Md.
Diagnostic Clinic: "Knee Joint Injuries,"
Dr. John J. Moorhead, Professor of Traumatic Surgery, New York Postgraduate Medical School, Columbia University, New York, N. Y.

Intermission for Review of Exhibits

Diagnostic Clinic: "Complications of Pregnancy,"
Dr. William B. Hendry, Professor of Obstetrics and Gynecology, University of Toronto Faculty of Medicine, Toronto, Canada.
Diagnostic Clinic: "Laryngitis,"
Dr. Fielding O. Lewis, Professor of Laryngology, Jefferson Medical College of Philadelphia, Philadelphia, Pa.
Diagnostic Clinic: "Differential Diagnosis Between Ulcer of the Stomach and Duodenum and Gall-Stones,"
Dr. William D. Haggard, Professor of Clinical Surgery, Vanderbilt University School of Medicine, Nashville, Tenn.

Noon Intermission

1:00 P.M.

Address: "The Prognosis and Treatment of the Anginal Syndrome,"
Dr. Elsworth S. Smith, Professor Emeritus of Clinical Medicine, Washington University School of Medicine, St. Louis, Mo.
Address: (Subject to be announced),
Dr. Dean D. Lewis, Baltimore, Md.
Address: "Newer Concepts of Methods of Procedure in the Management of Infections of the Gastro-Urinary Tract,"
Dr. Joseph F. McCarthy, Director and Professor, Department of Urology, New York Postgraduate Medical School, Columbia University, New York, N. Y.
Address: "Treatment of Fractures,"
Dr. John J. Moorhead, New York, N. Y.

Intermission for Review of Exhibits

Address: "Problems of Hemorrhage in Obstetric Practice,"
Dr. William B. Hendry, Toronto, Canada.
Address: "Relation of Tonsils to Systemic Infection,"

Dr. Fielding O. Lewis, Philadelphia, Pa.

Address: "The Recognition of Affective Disorders and their Management,"

Dr. Louis J. Karnosh, Cleveland, Ohio.

Address: "The Surgery of Congenital and Acquired Ear Deformities,"

Dr. George V. I. Brown, Professor of Plastic Surgery, University of Wisconsin Medical School, Milwaukee, Wisconsin.

Dinner Intermission
7:00 P.M.

Address: "Lobectomy for Chronic Non-Tuberculous Suppurative Bronchiectasis,"

Dr. Edward E. Archibald, Professor of Surgery and Director of the Department, McGill University Faculty of Medicine, Montreal, Canada.

Address: "The Diagnosis of Pulmonary Diseases,"

Dr. Willis F. Manges, Professor of Roentgenology, Jefferson Medical College of Philadelphia, Philadelphia, Pa.

Address: (Subject to be announced),

Dr. John R. Fraser, Professor of Obstetrics and Gynecology, McGill University Faculty of Medicine, Montreal, Canada.

Address: "The Prevention of Heart Disease in Children,"

Dr. Edward L. Bauer, Professor of Diseases of Children, Jefferson Medical College of Philadelphia, Philadelphia, Pa.

Friday, October 20, 8 A.M.

Diagnostic Clinic: "Diseases of Civilization,"

Dr. George Crile, Cleveland Clinic, Cleveland, Ohio.

Diagnostic Clinic: "Diabetes in Children,"

Dr. Elliott P. Joslin, Clinical Professor of Medicine, Harvard University Medical School, Boston, Mass.,
and,
Dr. Priscilla White, Physician, New England Deaconess Hospital, Boston, Mass.

Diagnostic Clinic: "Pernicious Anemia,"

Dr. Lewellys F. Barker, Professor Emeritus of Medicine, Johns Hopkins University School of Medicine, Baltimore, Md.

Intermission for Review of Exhibits

Diagnostic Clinic: "Nephritis in Adults,"

Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, and Physician-in-Chief, Peter Bent Brigham Hospital, Boston, Mass.

Diagnostic Clinic: "Carcinoma of the Large Intestine and Rectum,"

Dr. John F. Erdmann, Professor of Surgery, Columbia University; Director of Surgery, Post-Graduate Hospital of Columbia University, New York, N. Y.

Diagnostic Clinic: "Transplantation of the Ureters,"

Dr. William E. Lower, Cleveland Clinic, Cleveland, Ohio.

Noon Intermission
1:00 P.M.

Address: "Surgical Management of Diseases of the Gall-Bladder and Ducts,"

Dr. George Crile, Cleveland, Ohio.

Address: "Diabetes Associated with Hyperthyroidism and with Tuberculosis,"

Dr. Elliott P. Joslin, Boston, Mass.

Address: (Subject to be announced),

Dr. William J. Mayo, Chief of Staff, Mayo Clinic, Rochester, Minn.; President, Inter-State Post-Graduate Medical Association.

Address: "Obesity—Its Forms and Treatment,"

Dr. Lewellys F. Barker, Baltimore, Md.

Address: "Types of Edema and their Treatment,"

Dr. Henry A. Christian, Boston, Mass.

Address: "Management of Acute Abdominal Conditions,"

Dr. John F. Erdmann, New York, N. Y.

Address: "Gastro-Intestinal Disturbances Associated with Diseases of the Upper-Urinary Tract,"

Dr. William E. Lower, Cleveland, Ohio.

Evening
Assembly Dinner
Informal

Saturday, October 21

Post-Assembly Clinics in charge of the staffs of Cleveland Hospitals.

ANNUAL MEETING OF THE ILLINOIS TUBERCULOSIS ASSOCIATION

The Annual Meeting of the Illinois Tuberculosis Association will be held at the Parkside Hotel, Kewanee, on September 18 and 19, 1933. Every member of the Illinois State Medical Society is cordially invited to be present at this meeting and participate in the discussion of the papers to be presented.

PROGRAM

Monday, September 18.

9.00—10.00. Registration.

10.00—11.00. Annual business meeting: Dr. E. S. Murphy, Dixon, Illinois, President of the Illinois Tuberculosis Association, presiding.

11.00—12.00. Meeting of the Board of Directors.

12.00 Special luncheon, Dr. H. N. Heflin, Kewanee, presiding. Speaker, Dr. Stuart Pritchard, President, National Tuberculosis Association, Battle Creek, Michigan. "The Scientific Background of Tuberculosis Work."

2.00. "Tuberculosis Control." Dr. M. Pollak, Peoria. (Followed by ten minute discussion.)

2.30. "Sanatorium Problems in Illinois." Dr. Robinson Bosworth, Rockford. (Followed by fifteen minute discussion.)

3.15. "Some of the Advancements in the Technique of Early Diagnosis of Pulmonary Tuberculosis." Dr. D. O. N. Lindberg, Decatur. (Followed by ten minute discussion.)

3.45. "Renal Tuberculosis." Dr. Baxter Brown, Peoria. (Open discussion.)

4.15. "Broadening Tuberculosis Programs." Dr. Arlington Ailes, La Salle. (Followed by ten minute discussion.)

4.45. "Indications for Collapse Therapy." Dr. A. T. Leipold, Rock Island.

6.30. 24th ANNUAL BANQUET. Dr. E. B. Cooley, Danville, Toastmaster.

1.—"Some of the Achievements in the Scientific Treatment of Tuberculosis Since the Discovery of the Tubercle Bacillus." Dr. E. S. Murphy, President, Illinois Tuberculosis Association, Dixon.

2.—"Subject to be Announced." Dr. Philip H. Kreuscher, President, Illinois State Medical Society, Chicago.

3.—"Subject to be Announced." Dr. Frank J. Jirka, Director, Illinois Department of Public Health, Springfield.

4.—"Problems in the Field of Work with Handicapped Children, with Special Reference to Tuberculosis Handicaps." (Illustrated.) Dr. Stuart Pritchard, President, National Tuberculosis Association, Battle Creek, Michigan.

Tuesday, September 19.

9.00. "Necessary Qualifications and Training for Public Health Nurses." Miss Mabel Dunlap, R. N., Director, Moline Public Health Nursing Service, Moline.

9.30. "Problems to be Solved in a Rural Tuberculosis Nursing Program." Miss Ruth Kirk, R. N., Whiteside County Nurse, Sterling.

10.00. "Necessity of Tuberculosis Case Reporting." Dr. D. D. Monroe, Superintendent, Madison County Sanitarium, Edwardsville. Discussion opened by Dr. Harold M. Camp, Monmouth.

10.30. "The Work of the Illinois State Medical Society in the Field of Health Education." Dr. Harold M. Camp, Secretary, Illinois State Medical Society, Monmouth.

11.00. "Tuberculosis Terminology." Dr. Imas P. Rice, Superintendent, Springbrook Sanitarium, Aurora.

11.30. "Educational Publicity." Mr. Charles A. Freck.

12.30. Special Luncheon. At this luncheon the Annual Business Meeting of the Illinois Conference of Tuberculosis workers will be conducted. Following that, there will be a paper by W. P. Shahan, Executive Secretary of the Illinois State Tuberculosis Association, on "Problems Often Confronting Voluntary Educational Organizations."

2.00. Informal round table discussion on County Association Problems.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES

FORTY-FIRST ANNUAL CONVENTION

CONGRESS HOTEL—CHICAGO

September 25-26-27, 1933.

Monday 9-25-33		
9:30 A. M.	BUSINESS SESSION—Florentine Room	Pres. R.C. Williams, Asst. Surg. Gen. P.H.S.
	SCIENTIFIC SESSION The new Concept of Training for Medical Department Reserves. Discussion. "Additional Medical Department Officer Procurement in the National Guard for a Major Emergency."	Lt. Col. W. Lee Hart, M. C. Asst. to the Corps Area Surgeon, Omaha, Nebraska.
12:00 N.	NICHOLAS SENN LUNCHEON	Col. David C. Hilton, M. C. Neb. N. G. Col. Gilbert FitzPatrick, Med. Res. Chairman.
	GUESTS OF HONOR	Dr. Emanuel J. Senn Dr. William N. Senn
	SPEAKERS	Col. Franklin H. Martin, Med. Aux. Maj. W. A. Evans, Med. Aux. Ill. N. G. Lt. John Ferrin, Med. Res. Chairman
1:30 P. M.	TRANSPORTATION (Buses) Congress St. Hotel entrance to Illinois Naval Reserves Armory foot of Randolph Street.	
2:00 P. M.	U. S. S. "Wilmette"	Capt. Ed. A. Evers, U. S. N. R. Comdr. 4th Naval Area
	CHICAGO SKY LINE BOATRIDE	Lt. Com. Overton Brooks, M. C.-F. U. S. N. R. Chairman
4:00 P. M.	A CENTURY OF PROGRESS Sight-seeing as you will.	
6:00 P. M.	GROUP DINNERS Century Club, Belgian Rathskeller, Heidelberg, Italian Cafe, Fish Bar, Czechoslovakia Restaurant, Pabst Blue Ribbon, Ann Rutledge Inn, etc.	Maj. L. E. Garrison, M. C. Ill. N. G. Chairman
8:00 P. M.	SMOKER—Illinois Host House	Lt. Col. C. C. MacLane, Med. Res. Chairman Col. Edward Davis—65th Cav.
	THE ALLENBY CAMPAIGN IN PALESTINE Official moving pictures taken by British, German and Turkish Signal Corps will be shown.	

2nd Day

Tuesday 9-26-33		
9:30 A. M.	TRANSPORTATION (Buses) Congress St. Hotel Entrance to A Century of Progress.	Capt. Carl Steinhoff, Med. Res. Chairman
10:00 A. M.	HALL OF SCIENCE—South Hall Doctor Carey will give a fifteen minute illustrated description of the exhibits which will then be visited in groups. Trained conductors are provided for each group and Representatives from the Universities preparing the special demonstrations for the occasion will expound the same.	Dr. Even J. Carey, Chairman Director Medical Section, Basic Science Division, A Century of Progress.
12:30 P. M.	LUNCHEON	Col. Gilbert FitzPatrick, Med. Res. Pres. R. C. Williams, Asst. Surg. Gen. P.H.S. Chairmen
	Hall of Science—Trustees Lounge	
	Presentation of Colors	Troops from Camp Whistler
	Music	3rd F. A. Band
	Addresses of Welcome	Hon. Ed. J. Kelly, Mayor of Chicago
		Hon. Rufus C. Dawes, President, A Century of Progress
		Rear Admiral Wat T. Cluverius, Comm., Great Lakes Naval Training Station
		Maj. Gen. Frank Parker, Comm. 2nd Army
		Maj. Gen. Roy D. Keehn, Comm. 33rd Div.
	Responses	Pres. R. C. Williams
	Foreign Delegates—Introduction	Maj. Edgar A. Hume, M. C. Librarian, The Surgeon General's Library
	Foreign Delegates Decorations	Pres. R. C. Williams
	Announcement of Winner	Henry S. Wellcome Prize Essay 1933.
	RECEPTION	Col. A. E. Lord, M. C. Ill. N. G. Chairman
2:30 P. M.	A CENTURY OF PROGRESS Sight-seeing as you will	
	3rd Day	
9:30 A. M.	BUSINESS SESSION (Florentine Room)	Pres. R. C. Williams, Asst. Surg. Gen. P.H.S.
12:00 N.	ADJOURN SINE DIE	

"The Medical Profession at large is invited to attend the Luncheon and participate in any and all functions of the Association."

AUXILIARY NOTES

Cook County

The following officers were elected at the annual meeting of the Woman's Auxiliary to the Cook County Medical Society held at the Stevens Hotel, Chicago, Wednesday, May 26:

President—Mrs. Lucius Cole.
President-Elect—Mrs. John A. Wolfer.
Vice-President—Mrs. F. P. Hammond.
Past President—Mrs. A. H. Brumback.
Recording Secretary—Mrs. C. A. Hedberg.
Corresponding Secretary—Mrs. Meyer Solomon.
Treasurer—Mrs. William Raim.

The business meeting was followed by a program.

The first Board meeting for the year will be held Wednesday, September 6, and the first open meeting is scheduled for Wednesday, October 6.

All doctors' wives are invited to attend this first open meeting and a special invitation is extended to out-of-town guests.

A CENTURY OF PROGRESS

In accordance with the plan announced in the April number of the Illinois Medical Journal, The Woman's Auxiliary to The Chicago Medical Society is cooperating with The Chicago Medical Society at its booth in the Hall of Science at A Century of Progress Exposition. Mrs. A. H. Brumback, Mrs. Lucius Cole, and the Presidents of the organized branches have this work in

charge. The members of the five branches in Chicago, Aux Plaines, Englewood, Jackson Park, North Shore and North Side—are hostesses at the booth. The enthusiasm of the members of the Chicago Auxiliary for this undertaking is indicated by the fact that a volunteer hostess has been in attendance at the booth each day since the opening of the Exposition. They have met auxiliary members, physicians' wives, and other visitors who have entered the booth or have shown interest in the exhibit. A card index is kept, and physicians' wives are invited to register. Up to August 15 more than 350 auxiliary members and physicians' wives had registered. About one-half of them were from Illinois, the remainder from 43 other states. From other countries the following guests have registered: Donata G. Alarcon, Tampico, Mexico; Mrs. Angus A. McLean, London, Canada; Dr. Isabel Reyes, Mexico City, Mexico; Mrs. Annabel Banks, Alberta, Canada; Mrs. L. Gyori, Havanna, Cuba; Mrs. G. Yosi, Havana, Cuba; and Mrs. W. G. Thurston, Maitlack, Saskatchewan, Canada; Mrs. Marcela L. deKabaydo, Box 47, Cadiz Occ Negros, Philippine Islands. The names of those who have registered are being published each week in the Bulletin of the Chicago Medical Society.

Visitors who enter the booth are told that they are the guests of the Chicago Medical Society and of the Woman's Auxiliary, and that they are welcome to rest in the comfortable chairs and settees. (These were provided by the Woman's Auxiliary.) The guests are invited to read the panels showing a Century of Medical Progress in Chicago, and the organization of The Chicago Medical Society.

Visitors to the booth have expressed enthusiasm for this artistic and instructive exhibit, and appreciation for the courtesies shown them by the hostesses. The hostesses also furnish information to physicians' wives concerning the Fair, the City of Chicago, and the Woman's Auxiliary.

In this work it has been the primary purpose of the Auxiliary to be of assistance to the wives of physicians visiting the Exposition. The hostesses also have had constantly in mind the chief objects of the Auxiliary—to assist the medical profession, and to disseminate knowledge concerning the aims and educational program of organized medicine.

The booth is located on the north ramp just inside the West entrance to the Hall of Science, near Eighteenth Street. The Woman's Auxiliary to the Chicago Medical Society extends a cordial invitation to all members of the State Auxiliary and to the wives of physicians and their friends to visit the booth of The Chicago Medical Society while attending the Exposition.

Through the courtesy of Miss McArthur a map of Illinois, showing the location of the County Auxiliaries has been placed in the office of the Educational Department.

NATIONAL CONVENTION

Milwaukee

Dear Fellow Members:

Not nearly all of us managed to attend the National Convention, held this year at Milwaukee, but those of us who did, came away with our hearts warmed by the friendliness of our reception, our heads filled with new ideas, and our spirits buoyant with the report of work accomplished throughout the States by *our* organization.

To satisfy our social instincts there were luncheons and bridge and teas, dinners, dancing, and last but not least to many, I'm sure, golf. The teas, given in the gardens of private homes, and a tour of the especially lovely gardens, arranged through the auspices of the Garden Club of Milwaukee, were altogether soul-satisfying and, after the business meetings, a means of shedding all but the beautiful in fact or fancy.

Speaking of the business meetings, there was much of interest. It is amazing how the nation at large is responding to the needs pointed out through the American Medical Association, by the workers in Auxiliary, and gratifying to hear the American Medical Association officers acknowledge the help given and plan new and wider paths for us to develop. These lectures and talks by the doctors were a part of our sources of inspiration, of course, along with a brief history of the birth of the Auxiliary and its development through the power of "love and friendship."

Many great and beautiful tributes were paid to our late President, Mrs. Corinne Keen Freeman, whose life in recent years had been given almost completely to her work in the Auxiliary, and there were paeans of praise for Mrs. James F. Percy who took up her work and consummated it so successfully.

It is just too bad we could not all hear the reports of the State Presidents—to know what devotion is being given to the education of the laymen throughout the Union, and what strides are being made in having Medical Knowledge dispensed by medical men only. Medical facts are being instilled into teachers and students through essay contests, sponsored by Auxiliaries, the material for the essays to be gleaned from *Hygeia*. There are student loan funds, funds for philanthropy and benevolence, and of course, the regular and in some cases the extra-ordinary developments along the major lines of Legislation, Public Relations, Self-education, *Hygeia* and so on.

Texas, the first state to organize, has an $800.00 Student Loan Fund—the proceeds from a book, "The Medicine Man in Texas," written and donated by Mrs. S. C. Red of Texas, first National President of the Woman's Auxiliary to the American Medical Association, which fund is destined to grow as it is an intimate history of the development of medicine in Southwestern United States. Another National President, Mrs. John O. McReynolds, also of Texas, has donated a fund for the relief of physicians' widows.

These are a few of the inspiring facts unfolded to us, and part of the reason for the enthusiasm we took away with us from this National Convention.

We were proud to feel that the next National President, Mrs. James Blake, was from a sister state, Minnesota, and that among the officers, our own state was represented by such charming women and able workers as Mrs. Rollo K. Packard, the new Second Vice-President; Mrs. G. Henry Mundt, Resolutions Chairman; Mrs. E. W. Mueller, Retiring State Presi-

dent; Mrs. Solomon Jones, incoming State President; Mrs. Lucius Cole, State President-Elect. Mrs. T. O. Freeman, our recent President, was kindly remembered. The National Board invited Mrs. A. H. Brumback to give a three minute talk on the Chicago Auxiliary Booth at A Century of Progress.

We were given the slogan—"Know Your Auxiliary" and admonished to read our County, State and National Bulletins.

This is but a spark I am passing along in the hope of intriguing your interest in our National Conventions. You really should not miss the "Reports of the States" each year. Do not fail to read the complete report and minutes of the Convention which are to be published and forwarded to each auxiliary in the fall.

Yours in interest,
Maude Wolfer
Mrs. John A. Wolfer, Recording Secretary

NUCLEI OF DISEASE IN THE AIR

We may esteem ourselves fortunate that the detection of non-radioactive substances is less sensitive than those that have been described. If we could see how many nuclei of dirt, dust, and disease are contained in the air we constantly inhale, we might be terrified and hardly dare to breath. Nature in her wisdom has arranged matters so that in the course from the ponderable to the imponderable the limits of visibility coincide approximately with the limits of weighability. Let us be thankful that it does not reach down to the individual atoms. —Hahn, Otto: From the Ponderable to the Imponderable, *Science* 77:403 (April 28) 1933.

SOME ODD FACTS ON HAY FEVER

Hay fever, which annually brings sneezes and watery eyes to thousands, may be caused by substances ranging all the way from face powder to canary feathers, doctors assert.

The disease is usually caused by irritation of the mucous membrane of the eyes, nose and throat by tiny grains of plant pollen floating in the air.

The University of Maryland Hospital cites the case of a girl who suffered from hay fever the year around, instead of merely during the usual season.

It was discovered that she used a face powder made from orris root, a plant to which she was super-sensitive. Her symptoms disappeared after she changed to another powder with a different base.

Another woman who raised canaries and kept about 50 of them at home was found to be sensitive to canary feathers and promptly recovered from her attack of the malady after the birds were removed.

ECONOMICS

This is the critical hour. The doctors still have the opportunity for preventing outright socialization of medicine, by presenting a plan of their own for solving the problems of medical economics, whether by group practice, state subsidy, voluntary insurance or whatnot.

If the doctors resentfully lose this opportunity, a plan for medical care will arise anyway. But it will come in the worst way. The doctors will have forced political control of the practice of medicine upon themselves, by fighting it without vision.—The Medical Bulletin, The Sedgwick County Medical Society, April, 1933.

Child health is a recognized part of Public Health work. Properly controlled and administered it is of great value to the public at large and to the profession.

It teaches the public that frequent and regular examinations of infants and children make for childhood and adult good health and will prevent loss of life.

If the profession at large is alert and will fit themselves to give service as good as that obtained at the infant and child health stations the paying public will seek the private doctor for individual service.—The Bulletin of the Los Angeles County Medical Association, May 4, 1933.

In a very entertaining special article in the State Medical Association Journal of February, 1932, Edward H. Ochsner of Chicago makes the following observations:

"It is a profound mystery why the people of the present generation should so violently run after the very things their forefathers so violently ran away from in 1776. One of the chief indictments of King George set forth in the Declaration of Independence reads: 'He has erected a multitude of new offices and sent hither swarms of officers to harass our people and eat out their substance.' — Thirty years ago one person in every forty-five was in government employ while now one in every twelve is so employed.

"IF A NATION DOES NOT EDUCATE ITS CITIZENS TO INDIVIDUAL RESPONSIBILITY IT WILL SOON HAVE NO ONE CAPABLE OF ASSUMING PUBLIC RESPONSIBILITY."—Exchange.

EARLY TO BED AND EARLY TO RISE

Early to bed and early to rise does very well with preachers and guys, but makes a man miss all the fun till he dies, and joins the stiffs that are up in the skies. Go to bed when you please, and lie at your ease, and you'll die just the same from a Latin disease.—Gillard's Medical Journal.

In the passing of the Preceptorial System the medical student lost much of the personal touch with patient and teacher, which so richly endowed the "doctor" of other days with those paternal attributes which made him the father-confessor and friend-at-large to prince, pauper, poet and priest.

'Twere difficult to visualize "Dr. Weelum MacClure" pushing his bulky frame into the crowded elevator car of a modern sky-scraper college; to see on the twentieth floor a cinematographic reproduction of karyokinesis. He lacked much in scientific knowledge as his modern descendant knows it, but his affluence in the knowledge of the human heart made him *frater* to all. Alas, that he has gone!

Original Articles

THE DIAGNOSIS OF CHRONIC ARTHRITIS*

DOUGLAS BOYD, M. D.
Clinical Assistant, Northwestern University Medical School
HIGHLAND PARK, ILLINOIS

No classification of chronic arthritis is universally satisfactory but we have followed that popularized by Cecil,[1] and feel that this grouping has been of definite aid in clarifying the fundamental clinical differences. It is highly important to know which form of arthritis we are dealing with in order to give an intelligent prognosis and to plan a reasonable course of treatment.

CHART 1 — CLASSIFICATION OF ARTHRITIS*

I. INFECTIOUS	a. Rheumatic fever b. Rheumatoid or infectious arthritis c. Arthritis caused by specific organisms
II. DEGENERATIVE HYPERTROPHIC	Osteoarthritis
III. ALLERGIC	Serum sickness
IV. TRAUMATIC	
V. METABOLIC	a. Gout b. Scurvy c. Rickets
VI. NEUROGENIC ARTHROPATHY	Including Charcot joints, Syringomyelitic and Post Hemiplegic.

*From Cecil, R. L., Rheumatoid Arthritis, J. A. M. A., C:1220, April 22, 1933

*Read before Section on Medicine of the Illinois State Medical Society, Peoria, May 16, 1933. (Symposium on Arthritis.)

This terminology defines two main groups: 1. Chronic infectious arthritis, in which we place atrophic arthritis as a special type, and 2. Degenerative or hypertrophic arthritis.[1] The second is by far the larger group as seen in the Arthritic Clinic of Northwestern University Medical School. This grouping has value, we feel, because it emphasizes the distinction between the infectious and the noninfectious forms. This distinction is justified from both the clinical and the experimental background. Clinically, the atrophic form of the infectious group behaves very differently from the majority of its group. It occurs most frequently in women of a definite constitutional makeup; the young, thin, fair skinned, flat chested, anemic and chronically fatigued. Characteristically it is most stubborn to treat, ordinarily showing a steady and progressive course to invalidism. In the degenerative or hypertrophic group we have felt that the process is essentially a degenerative change. It has been seen so frequently with associated evidences of age—arteriosclerosis, myocarditis and senile changes.

These two major groups present major differences, which are best clearly presented in the following Figure 2, adopted from Cecil[1] and Dawson et al.[3]

In Chart 2, most of the differential points are

CHART 2—DIFFERENTIAL POINTS IN DIAGNOSIS OF CHRONIC ARTHRITIS

	INFECTIOUS ARTHRITIS	HYPERTROPHIC ARTHRITIS
Past History	Frequently Tonsillitis, Sinusitis	Not characteristic.
Age Onset	Over 80% between 20 - 50 years.	Most frequently 40 - 55
Focus Infection	Usually present	Usually absent
Weight	Undernourished	Well nourished
Blood	Frequently low Hemoglobin, Leukocytosis	Normal Hemoglobin, no leukocytosis
Joint Involvement	Symmetrical — Generalized	Less generalized, chiefly larger joints, knees, back
Morbid Anatomy (Bone)	Rarefaction	Condensation
Appearance Joints	Early: Periarticular swelling, fusiform fingers Late: Ankylosis, extreme deformity	Early: Slight articular enlargement. Late: More pronounced enlargement, incomplete ankylosis, Heberden's nodes.
Subcutaneous Nodes	Present in 15 - 20%	Not present
Sedimentation Rate	Usually greatly increased, average 43 mm.	Normal or slightly increased
Roentgen Findings	Early: Periarticular swelling, slight narrowing of joint Late: Osteoporosis, bone destruction with new bone formation; ankylosis and deformities	Early: Slight lipping at joint margins Late: Marked lipping, osteophyte formation, and hyperostosis
	N.B. This applies to the Atrophic type. In the larger percentage the simple infectious type shows only periarticular pathology.	

"Diagnosis of Chronic Arthritis," Douglas Boyd, M.D.

clearly indicated. I would like to emphasize certain factors in the table.

In the infectious group an assiduous search should be made for foci of infection. The gastro-intestinal tract frequently acts such a role in cholecystitis, appendicitis, and at times in obstinate constipation. This important fact may be overlooked.

Changes in the blood picture depend somewhat on the stage of the disease and are important in the infectious type. Early patients frequently show a leucocytosis without an anemia. Later anemia develops and the leucocytosis disappears. The anemia is particularly apt to be prominent in that type we call atrophic arthritis.

Blood chemistry studies have not proved helpful to us. In one group of 134 patients studied a few years ago, the sugar tolerance test was normal in 96.3%. This indicated to us that the carbohydrate utilization in arthritics as a group was not disturbed. Blood sugar examinations gave 100% normal values in our clinic. Blood nitrogen values were 84% normal in a recent group and as many of these patients were beyond the fourth decade, we did not feel this a significant variation. Blood uric acid determinations gave a more significant variation from the expected. This was due to the incident of gout. More uric acid determinations were done because this condition was suspected.

CHART 3 — BLOOD CHEMISTRY IN CHRONIC ARTHRITIS

Test	No. Determinations	% Normal
Blood Sugar	76	100
Sugar Tolerance	134	96.3
Non-Protein Nitrogen	72	84
Urea Nitrogen	73	84
Uric Acid	82	71

Roentgenograms should be confined to the doubtful cases and to those patients in whom it is vital to determine the extent of joint damage in defining treatment. Routine roentgenograms are unnecessary. When they are used, it is essential that definitive films in two planes be obtained, and this is particularly necessary for the spine. We have found roentgenograms most helpful in clarifying the diagnosis of spinal arthritis, and in differentiating this from spinal injuries and abnormalities.

The sedimentation rate of the erythrocytes has been of considerable value in determining

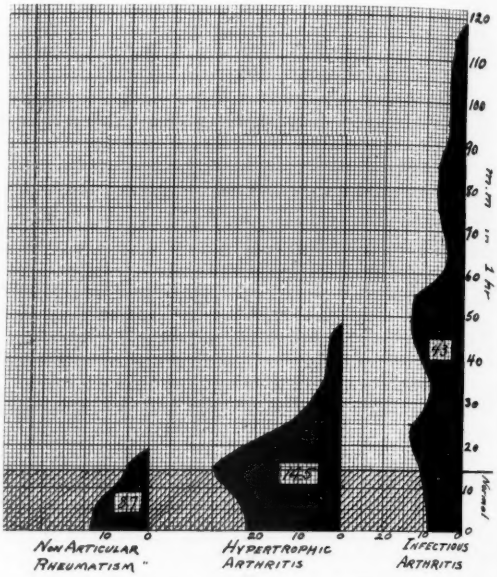

Fig. 1. Sedimentation rates in different types of arthritis.

the activity of the infection present and in differentiating the two types of arthritis in some clinics.[2] We have used this method little. In infectious arthritis, the sedimentation rate parallels to an extraordinary degree the severity and extent of the arthritic process. In infectious arthritis, the rate was often greatly increased, often exceeding 30 millimeters in one hour, where in the degenerative arthritis the rate was usually normal and rarely exceeded 30 millimeters in one hour. Kahlmeter[3] also found the sedimentation rate a useful guide in the differential diagnosis.

Study of the basal metabolic rate has not given us much aid in the study of arthritis. In the last 140 determinations, we found only 12% below minus 15 and only 4% above plus 15, a variation we do not feel is of significance for the group. An occasional patient (seven) was found with a metabolism rate below minus 20%, a very significant value for the individual patient, if constant. One will see myxedema in a large arthritic clinic, as one sees other pathological conditions. Patients may easily be selected for metabolism study, but we do not feel such tests need be done very frequently.

DIFFERENTIATION FROM OTHER PATHOLOGICAL CONDITIONS

As patients appear in the clinic, we have found several conditions which cause confusion in the

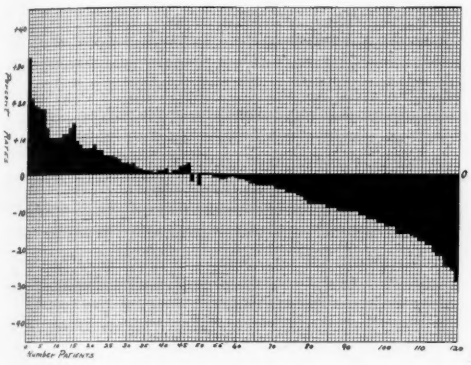

Fig. 2. Basal metabolism rates in arthritis.

diagnosis. Frequently we have found static abnormalities, poor body mechanics, a cause of confusion. Here, we group those with flat feet, poor posture, and deformities due to trauma. It is true that these difficulites, if borne for years, will produce arthritis in neighboring joints, particularly where weight bearing joints are involved. But earlier they may be separated from an arthritic class and treated more effectively by mechanical corrective measures. Developmental defects of the spine are best defined by roentgenograms and are most helped by orthopedic measures.

Certain vascular diseases may give confusing symptoms. The leg pains of advanced arteriosclerosis, of thromboangitis, and variocose veins bring patients to the arthritic clinic. Each condition may be readily recognized by suitable local examination.

At times the girdle pains and the leg pains of late syphilis may raise a diagnosis question, but proper histories and serological examinations will usually clarify the clinical picture.

Gout still occurs, and should be considered a separate disease entity. The following criteria, emphasized by Cecil, and by Hench[4] will ordinarily clear any confusion:

a. History of onset with acute pain in the great toe.

b. The intermittent nature of the acute and subacute attacks, frequently associated with complete joint remissions.

c. Occurrence of gouty tophi in ears or about joints.

d. Increased uric acid in the blood.

e. Characteristic roentgenological findings of punched out areas in epiphyses of the bones.

Local disease in one large joint may cause some confusion. X-rays are of the greatest aid in determining the presence of joint tuberculosis. Subdeltoid bursitis should be diagnosed by the physical examination showing localized tenderness, characteristic pain on abduction and at times by roentgenograms showing calcification in the bursal sac.

The diagnostic problem is then two fold—first, to separate arthritis from other confusing clinical conditions; and secondarily, to place the individual case of arthritis in its proper group. Rational and successful treatment awaits such recognition.

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3. Kahlmeter, G., Fischer, A., and van Breeman, J.: Acta Rheumatologica, Anno I, No. 3, Oct. 1929.

4. Hench, P. S., Vanzant, F. R., and Nomland, R.: Tr. Ass. Amer. Physic. XLIII: 217, 1928.

THE TREATMENT OF ARTHRITIS BY ELECTROPYREXIA*

D. E. MARKSON, M. D., F.A.C.P., AND S. L. OSBORNE, B.P.E.
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The treatment of chronic infectious arthritis by diathermic hyperpyrexia was first described in the ILLINOIS MEDICAL JOURNAL, November, 1931.[1] Since that preliminary report was published several American and European workers have reported their experiences with electropyrexia in the management of this disease. With the exception of Tenney,[2] who used radiothermy, the other reports deal exclusively with the diathermic method. In favor of diathermic hyperthermia, however, is the ease with which it can be controlled at any stage of the fever curve, as well as the safety of the procedure. Neymann, Feinberg, Markson, and Osborne[3]

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have discussed the other methods in some detail in a previous communication, and you are referred to that article for more complete information. The purpose of this paper, is to present a larger group of treated cases observed over a longer period of time, rather than to enter into a discussion of the different techniques in use. Furthermore, it is intended to emphasize the fact that eight or ten hour artificially sustained temperatures of 104° or higher, by any safe means, is a valuable addition to the therapy of resistant cases of arthritis.

Selection of Cases. Probably our greatest error in the early stages of our work arose from the improper selection of cases. Several severe reactions occurred with patients of the hypertrophic group, such as fibrillation, myocardial failure, acute delirium, and vasomotor collapse, but fortunately no deaths occurred as treatment was abruptly terminated in each instance and restorative measures applied. We now exclude this group entirely, as we have very convincing evidence that this degenerative type of arthritis has a high incidence of cardiorenal damage, probably 30%[4] more than a non-arthritic group of the same age and constitutional type. Rightfully, this disease should be classified as an arthrosis to distinguish it from the inflammatory conditions of the joints, or the arthritides. The degenerative lesions in the joints are considered by many as a manifestation of the general changes of senescence.

We now choose our cases from the infectious group entirely. Infectious arthritis is used synonymously with rheumatoid arthritis of the British and proliferative arthritis described by Nichols and Richardson.[5] This group includes the younger arthritics whose cardio-vascular systems are able to withstand this rather strenuous treatment. However, in a few instances, patients with compensated hearts and valvular lesions, mitral stenosis and insufficiency, withstood a modified temperature curve very well; i.e., a curve of shorter duration with lower plateau than ordinarily used. All patients selected for treatment are carefully checked up in the general medical clinic with a re-examination in the arthritis clinic according to a definite, thorough routine in use for many years. This method helps us rule out many vague syndromes simulating arthritis, and, at the same time, gives us an opportunity to determine the patient's ability to withstand hyperthermic treatments. After the routine measures of management are tried first without any decided improvement, hyperpyrexia is then advised.

Technique. Eight weekly treatments have been arbitrarily chosen as a course although a larger number might prove more beneficial. At least, it is certain that eight should be the minimum number in one course. Obviously, these treatments must be given in a hospital under the constant supervision of a nurse who is familiar with all the details of the technique as well as the reactions that occur. A physician must be on call at all times. Preferably, the patient enters the hospital the night before and is given a light diet. Following breakfast at 8 A.M., the treatment is started.

A high frequency current generator of ample capacity is of prime importance. The generator we use is capable of delivering ten amperes under load, and gives us the opportunity to treat two patients simultaneously.

The desired temperature is reached through heat insulation. This is a very essential factor for the successful maintenance of the fever over a number of hours. The use of a heat insulating treatment bag makes this very simple and effective. The treatment bag is opened and placed over the patient's mattress—so that he or she is wrapped in two layers of bath blankets to absorb the perspiration. Special care is given to the region of the shoulders and neck where there is the greatest likelihood of heat loss. The entire bag is then closed by means of a hookless fastening arrangement (zipper type). There is a suitable opening for the electrode leads, and the thermometer readings. The patient is entirely enclosed with the shoulders and neck thoroughly insulated from heat loss no matter how restless he or she may become. The advantage of this waterproof bag is that it can be washed after use without damage. A recording or registering thermometer shown in Figure 1, is the type used. However, an ordinary rectal thermometer can be used in an emergency.

We feel that the electrode application is of sufficient importance to be given in detail. With the patient in a sitting position the entire trunk is anointed with a conducting lubricant. Then the Neymann fenestrated electrodes are applied so that the upper border is at about the level of the second or third dorsal vertebrae, with the

jacket placed over the electrodes low enough not to chafe under the axilla. Now the patient lies down, and if necessary, the jacket is straightened out under the buttocks. The chest electrode is next applied but not moulded to

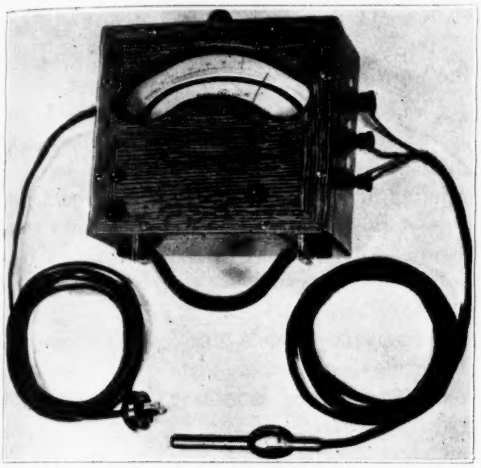

Fig. 1. Recording thermometer.

conform to the contours of the trunk, in fact, the hands play no part at all in shaping the electrodes. This is accomplished entirely by means of the retaining canvas jacket which is first laced evenly down the front and finally down each side. When this is carefully done, the electrodes will conform well to the shape of the trunk without uneven pressure at the edges which is quite often the cause of the so-called "hot spots."

A recent study of various conducting lubricants[6] has shown that many of them are unsuitable for high frequency current conductivity. This work clarifies the so little understood problem of "hot spots" and scalds occasionally seen and erroneously thought to be high frequency current burns. As a result of this investigation, a new conducting jelly has been compounded which should make diathermy applications much safer and more comfortable.

The amount and duration of the current flow varies with the individual. Ordinarily, we use from thirty-six hundred to six thousand milliamperes, four thousand being the average. Our objective is to maintain the temperature at 104° for eight continuous hours, however, only one or two hours of the current application is required to reach this height. At the end of the eight hour period the patient is uncovered and allowed to cool until the rectal temperature drops to 100° F, at which point a tepid sponge bath is given and the patient placed in a freshly prepared bed. The time required for the entire procedure is approximately twelve hours.

CONDITION AND REACTIONS OF PATIENTS DURING TREATMENTS

The fever curve of arthritic patients is quite characteristic, the mouth temperature crosses and re-crosses the rectal temperature, but the normal relationship between the two is quickly re-established if the current is turned off temporarily. Restlessness and anxiety are prominent features at the height of the curve and are probably a physiological method of stimulating venous return.[7] In the average case, gr. ¼ morphine hypodermically quiets the patient. The tremendous fluid loss due to the profuse perspiration is partially supplied by the liberal allowance of fluids. The loss of chlorides which takes place coincidentally[8] is often manifest by vomiting and crampy pains in the muscles, and to offset this, we are now adding 6 grams of sodium chloride to each litre of water. The perspiration which, at first, is acid, soon becomes neutral and remains so during the entire treatment. The distribution of the sweating is peculiar. Sometimes the upper part of the body is bathed in sweat while the lower part remains dry. In a subsequent treatment with the same patient, a generalized sweating may occur. Probably the best guides to the patient's condition during treatments are the pulse rate, the pulse pressure, and patient's color. These should be noted every 15 minutes. Facial pallor or circumoral pallor often antecedes peripheral circulatory failure as does a pulse rate above 160 with a sudden drop in the systolic pressure. The treatment in such cases should be promptly discontinued and the temperature brought down to normal as quickly as possible. In the average case the systolic pressure remains unchanged or slightly increased with a drop of 30 to 40 M.M. of mercury in the diastolic pressure. However, since the routine use of morphine has been adopted, less variation in the diastolic pressure is noted. Intense local reactions at the site of previous typhoid injections, accompanied by a severe chill, may occur. We now avoid this by discontinuing all treatment for one week previous to hospital entry.

The severe pains in the joints which occur in the early stages of the curve, disappear as the temperature rises. The average loss of weight is from two to five pounds but it is regained in a few days. The later reactions, occurring two or three days after treatment are herpes labialis, weakness, loss of appetite, and increased joint pains. With the exception of the herpes, these symptoms promptly disappear leaving the patient stronger, with a better appetite, decidedly less joint pains and an increase in weight.

Laboratory Data. There is no variation from normal in the opsonic index, agglutinins, or complement content.[9] The leucocytes are markedly increased at the height of the curve with a relative increase in polymorphoneuclear cells. The erythrocytes are increased as is the hemoglobin. Dehydration partly accounts for these findings but stimulation of the bone marrow, as evidenced by the increase in the staff cells, may play a role.[10] The tendency of the eosinophils to disappear as the fever rises has no adequate explanation as yet. Sedimentation rates[11] taken after the treatments are completed, correspond with clinical improvement.

Microscopic studies of the nail-bed capillaries show, during the fever, an increase in the size, the number, and in the rate of blood flow.[2] There are also increased skin temperature readings as well as oscillometer readings of the deep circulation.

Blood chemical analysis shows an increase in the urea, non-protein nitrogen and uric acid which is accounted for by concentration. The blood[8] chlorides show no change or a slight decrease, indicating that there is a shift from the blood to tissues due to the concentration of approximately ten per cent. About 18 to 24 grams of sodium chloride is lost at each treatment and definite decline in the chloride content of the gastric secretion is noted.[8] There appears to be discrepancies on the blood ph. and alkali reserve by different workers. Mortimer[12] reports a definite decrease of the plasma CO_2 in both man and dogs. Bischoff,[13] reporting on the CO_2 combining power on human subjects, noted no change or a slight increase in the alkali reserve. Feinberg,[14] in 74 determinations, did *not* observe any increases in CO_2 combining power of the blood with high fever, although three (3) cases showed an increase of ten per cent. (10%) by volume. He also noted that alkalization of the patients previous to hyperthermia increased the CO_2 combining power before treatment, but during the fever it returned to normal. Blood lactic acid determinations on a series of our cases,[15] at various points of the fever curve showed no variation from the normal.

Clinical Results. Nine cases (Table 1), received a full course of eight treatments by diathermic hyperpyrexia, the temperatures ranging above 104 F., from eight to ten hours. One of this group received only six such treatments. All have been under observation from one to two years since we completed one course, and have been checked up at frequent intervals. The last survey, made May 3, 1933, showed the following—one had complete relief from symptoms for fifteen months; and another for twenty-one months; two for twenty months; no other treatment having been used in the interim. Three of the group remained improved for periods of twelve to fourteen months but had some recurrences of decidedly less intensity than before treatment began. The three cases who were unimproved are worthy of some discussion. *Patient L. S.*, bed-ridden for about three years was given six treatments with slight improvement; i.e., she could turn over in bed unassisted. *Patient L. J.*, a severe case of atrophic arthritis, improved decidedly for three months but has now returned to her original status. *Patient D. F.* was a complete failure as she did not co-operate with us during the treatments and as a result the fever was not properly sustained. The summary of this group shows that seven or 70% remained decidedly improved from one year to twenty-one months. The duration of these remissions, we believe, is convincing evidence of the value of this type of therapy in spite of the fact that the number of cases treated is too small to be conclusive.

Dr. Coulter suggested that we also try sustained fever curves of shorter duration using such agents as radiant heat, hot water baths, diathermy, and blankets. These could be more easily carried out in the home, the office, or the clinic at a minimum cost to the patient. The results of such shorter curves, although not comparable to the well sustained groups, are sufficiently encouraging to warrant their con-

TABLE I. — THIS GROUP OBSERVED FROM ONE TO TWO YEARS
SUSTAINED TEMPERATURE CURVES — 8 TO 10 HOURS ABOVE 104° F.

	Type and Duration	Joints Involved	Previous Treatment	Hyperthermia	Results
F. D. — 34 F.	Chronic Infectious 3½ years.	Fingers, wrists, knees, cervical spine. Partial ankylosis of left knee (fixed in partial flexion). Motion extension 160°, flexion 90°.	Removal of tonsils and infected teeth. Vaccines, Physiotherapy (radiant heat, infra red, muscle training, home physiotherapy). Orthopedic (cast to left knee). Clinic treatment 1 year.	Began April 16. Ended May 15. 8 weekly treatments.	Improved. Is able to walk in erect position. Motion in fingers and wrists markedly improved. Now able to do own housework for first time in 2 years. Remission — 14 mos.
N. P. — 34 F.	Chronic Infectious 4½ years.	Fingers, wrists, shoulders, knees; walks with difficulty because of pain in both ankles.	Treatment of chronic suppurative sinusitis — chronic purulent otitis media and chronic endocervicitis. Vaccines — colon diet, physiotherapy, management of constipation. Clinic treatment 1 year.	Began April 22. Ended May 22. 8 weekly treatments.	Improved. Relief from pain and stiffness in all joints. Is now able to walk without pain. Remission — 12 mos. Is still able to walk without pain, but has pain in shoulder.
E. C. — 34 F.	Chronic Infectious 3 years.	Polyarticular. Cervical spine, shoulders, fingers of both hands, and elbows. Pain in both feet.	Tonsillectomy. Vaccines and non-specific therapy, arsenicals, iodides. Clinic treatment 6 months.	Began May 21. Ended June 25. 8 weekly treatments.	Markedly improved. Relief from pain. Stiffness of spine decidedly better. Other joints less painful. Remission — 21 mos.
D. F. — 18 F.	Chronic Infectious 18 mos.	Wrists, elbows, knees, shoulders and fusiform swelling of fingers.	Began at once with diathermy.	Began July 23. Ended Sept. 21. 8 treatments.	Not improved. Patient did not co-operate. Temperature curve not sustained.
D. B. — 45 M.	Subacute Infectious 14 mos.	Polyarticular especially the proximal interphalangeal joints 3rd and 4th fingers of left hand. Unable to work 6 months.	Tonsillectomy. Treatment of prostatitis, autogenous vaccines, physiotherapy. Clinic treatment 3 months.	Began May 20. Ended July 8. 8 treatments.	Markedly improved. All pain and stiffness entirely relieved after 4th treatment. Iritis improved after 3rd treatment. Remission — 20 mos.
E. P. — 31 F.	Chronic Infectious 3 years.	Right wrist, ankles, knees. Difficulty in walking. Cannot straighten arms and legs.	Tonsillectomy. Vaccines, physiotherapy, body mechanic exercises. Treated 1 month in clinic.	Began June 5. Ended Aug. 17. 8 treatments.	Improved. Remission —12 months.
L. J. — 40 F.	Chronic Infectious 5 years.	Fingers, wrists, knees, elbows, ankles. Partial ankylosis of wrists and elbows and fingers. Difficulty in walking stairs due to stiffness.	Treated in many clinics. Our clinic for 2 years, with indifferent results.	8 treatments. Last treatment Nov. 30th—'32. Last seen May 3rd — '33.	Not improved.
G. T. — 47 F.	Chronic Infectious 2½ years.	Limitation of motion and pain right knee and elbow, pain and swelling of fingers of left hand, lumbar pain.	Care of teeth. Tonsillectomy, autogenous vaccine, baker, massage, body mechanic exercises, reducing diet, thyroid.	8 treatments. Last observed May 3rd — '33.	Marked improvement. Motion in right knee and elbow markedly improved. Relief from pain decided. Remission — 15 months.
F. B. — 37 M.	Chronic Infectious 3½ mos.	Pain, stiffness of ankles — both feet and knees and elbows. Unable to work.	Maxillary sinusitis treated. Autogenous, vaccine from tonsil, radiant heat. General care for secondary anemia.	8 treatments. Began Sept. 25 — '31.	Markedly improved. Remission — 20 months.
L. S. — 48 F.	Chronic Infectious 3½ years.	Fingers, wrists, elbows, hips, knees and back. Invalid.	Treated in many clinics.	6 treatments. Last seen May, 1932.	Not improved.

NINETEEN TREATMENTS GIVEN TO FIVE PATIENTS ARE NOT INCLUDED IN THIS GROUP. (Course not completed.)
TOTAL TREATMENTS — LONG CURVES, NINETY-SEVEN.

tinued trial. A resume of this group is given in Table 2.

Nine cases were given fever curves of 104° for a four hour period. The total number of treatments given to this group was seventy-seven. Six was the minimum number, twelve the maximum, while the average was eight. Five of this group were definitely improved with remissions of three months or longer. Three of this group were improved for only one

TABLE II. — SHORT TEMPERATURE CURVES — 104° F. FOR FOUR HOURS. AGENTS USED — HOT WATER BATHS, ELECTRIC BAKER, BLANKETS, DIATHERMY — THIS GROUP OBSERVED ONE YEAR OR LESS.

	Type	Joints Involved	Previous Treatment	Hyperthermia	Results
L. M. — 51 M.	Chronic Infectious. G. C. 9 months.	Spine, tempero-mandibular articulation. Inability to open mouth completely; cannot straighten back.	Treatment of posterior urethritis and otitis media. Tonsillectomy — care of teeth, hot baths — vaccines, etc. Clinic 5 months. Slight improvement.	9 treatments.	Complained of weakness, loss of 12 lbs. weight, but all pains relieved. Can straighten back without discomfort. Short remission — recurrence.
G. G. — 35 F.	Chronic Infectious 5½ years.	Wrists, elbows, knees ankles. Partial ankylosis of right elbow and fingers, ankylosis left knee and wrist. Rheumatoid arthritis, nodes on both forearms.	Treatment in many institutions and clinics — no improvement. Clinic — 9 mos.	12 treatments.	No improvement. Recurrence after one month. Marked gain in weight.
G. S. — 46 M.	Chronic Infectious 3 years.	Cervical spine, left elbow, right shoulder, both feet and wrists. Partial ankylosis right elbow.	Tonsillectomy. Vaccines, radiant heat, massage, baths— No improvement. Clinic treatment 2 years.	6 treatments. Last treatment June, 1932. Last seen, May, 1933.	No improvement.
J. G. — 29 M.	Subacute Infectious 5 years.	Polyarticular especially hip joint and cervical spine.	Treatment outside clinic 4 years. Tonsillectomy, care of teeth, physiotherapy. In clinic — vaccines, radiant heat, massage, etc. No improvement.	12 treatments. Last treatment Oct. 11, 1932; last seen, May 3rd, '33.	Improved. Still has stiffness in right hip but increased motion. Can straighten back without pain. Remission — 5 months.
P. J. — 41 M.	G. C. Arthritis.	Ankles and right hip. Swelling, pain, stiffness of both ankles. Limps because of pain.	Treatment in G. U. Dept., posterior instillations, etc. Arthritis Clinic, vaccines, radiant heat, etc. Slightly improved.	7 treatments.	Improved after 2nd treatment. Swelling and pain disappeared. Remission—3 months.
M. W. — 40 F.	Chronic Infectious.	Polyarticular—particularly right hand and ankle. Severe backache (cervical spine).	Foci — tonsils, teeth and sinuses. Treated in clinic one year.	8 treatments. Last Jan. 27, '32 Observed, May 3rd — '33.	Improvement for one month. Recurrence of symptoms.
W. S. — 44 M.	Infectious Arthritis 3 years.	Left shoulder severe, right shoulder, back, elbows and fingers. Knees and ankles at times.	Wetherbys—vaccine—physiotherapy (radiant heat, etc.). Treated in clinic 2 years.	8 treatments. Last Mar. 24,'33. Last seen May 3, 1933.	No improvement. Still has severe pains in shoulders and other joints. Relief only temporary.
A. K. — 38 F.	Infectious Arthritis.	Pain in wrists, eblows, knees, ankles — since Aug. 1932.	Teeth removed — Poncreatic tissue extract, etc.	8 treatments. Last April 18, '33. Last seen, May 3, 1933.	No improvement.
A. McG. — 37 F.	Infectious Arthritis 7 years.	Wrists, knees, shoulders, elbows.	Teeth removed — tonsillectomy. Hysterectomy — before coming to clinic. Clinic treatment since November, 1932.	7 treatments. Last April 28; Last seen, May 3rd, '33.	Improved for one month after treatment.

FOURTEEN TREATMENTS ARE NOT INCLUDED IN THE ABOVE TABLE (Course not completed).
TOTAL SHORT CURVE TREATMENTS, NINETY-ONE.

month and are included in the group with no improvement. The percentage of improved cases, therefore, is 56%.

Nineteen treatments, not included in Table 1 were given to five patients. These patients did not return for various reasons and are not included in our report. Fourteen treatments not included in Table 2 represent unfinished courses of less than six. Thus, one hundred and eighty-eight treatments have been given to twenty-eight different patients without a single death. This speaks well for the safety of the method provided ordinary care is used.

Other authors have reported favorable results in treating this disease with electropyrexia. Bishop, Horton and Warren,[16] state that fifteen unselected cases were definitely benefited. Tenney,[2] using radiothermy, on 63 arthritis

cases reported, seven symptom free, 48 markedly improved, and eight unimproved. Fifty-five, or 87% were definitely improved for a period of eight months. Auclair, Emery and Weil,[17] are very enthusiastic proponents of this therapy in the treatment of rheumatism, arthritis and gout. Cecil,[18] states that his results are disappointing, but mentions the fact that in some cases the results are permanent.

In conclusion, we wish to state that this method is not offered as a cure for arthritis nor are the facts presented intended to convey the impression that it will replace all types of established therapy, but rather is it presented as a new method which offers much more hope for the intractable cases.

SUMMARY

The results of the prolonged hyperpyrexia treatments are discussed, and compared with those of the shorter sustained group. The evidence presented is preponderantly in favor of the former both as to the number benefited and as to the length of the remissions. From the reports of others as well as our own results, we believe, electropyrexia has been established as a valuable method in the treatment of selected cases of intractable arthritis. The technique, laboratory data, and reactions, are discussed in some detail. The group of cases presented is too small to be conclusive, but is very convincing when considered from the point of view of the length of the remissions. Diathermic hyperpyrexia is a safe procedure, provided ordinary care is used.

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METHODS OF PRODUCING HYPERPYREXIA BY VARIOUS PHYSICAL AGENTS*

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There is at present a great deal of work being done both in this country and abroad to evaluate electrically induced fever as a therapeutic procedure. Evidence is fast accumulating attesting to its superiority, and it will undoubtedly in the future, supplant many forms of foreign protein therapy. Electrically produced hyperpyrexia was first introduced by Neymann and Osborne[1] in 1929 using high frequency currents (diathermy). Since then other methods have been introduced and each has its own particular advocates.

For the past year we have conducted a careful investigation to determine the relative merits of the various methods employed for the production of fever. We have used high frequency currents, ultra high frequency currents, electric light cabinet, electric blanket, hot water, and infra red cabinet. As far as practicable each patient was subjected to the same number of treatments by each of the various methods, and the reactions of the patients noted.

All patients were sent to us from Northwestern University Medical School's arthritis clinic with a diagnosis of infectious arthritis. All of these patients had failed to respond to

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other methods of treatment. In each patient a temperature of 104° F. or more was induced and maintained for four hours. We also wanted to determine the therapeutic value of this short temperature curve. No patient was hospitalized. They came to the medical school in the morning, were given their treatment, and left late in the afternoon, some patients traveling by street car. Such a procedure proved quite safe.

Twenty-five treatments were given by means of diathermy using the technic first described by Neymann and Osborne.[3] This method from the standpoint of the patient's comfort is undoubtedly the method of choice. Undoubtedly this comfort has a physiological basis because the heating is more internal and not at the expense of the delicate nervous mechanism of the skin as is the case of external applications where the internal heating is produced by conduction. One of us has data soon to be published illustrating this action graphically. The cooler skin temperature probably makes diathermy a safe procedure. It is true that patients with excessive adipose tissue do not tolerate diathermy well with the usual technic as noted by Neymann et al.[4] However, this difficulty can be overcome by using the cuff method of application.

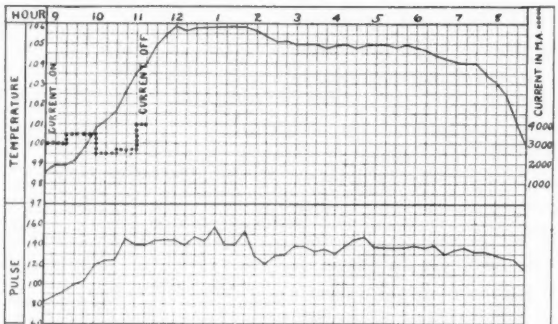

Fig. 1. Temperature curve produced by diathermy.

The temperature attained was held by using the treatment bag which has been described by Feinberg, Osborne and Steinberg.[2] The necessary thorough heat insulation without such a bag is difficult to secure. Moreover, the use of such a bag makes unnecessary the employment of numerous heavy blankets, and prevents the extreme exhaustion of the patient therefrom.

A record of pulse, respiration and rectal temperature is made every fifteen minutes. An exception is made in the case of water for reasons explained later. It is the safest practice, as has been repeatedly emphasized by others, to rely upon rectal temperature. We used electric indicating thermometers, and if possible such thermometers should always be used. The value of having the temperature constantly under observation obviously needs little comment. A device of this type is illustrated in Fig. 1. (See paper by Markson and Osborne.)

The patient often becomes quite restless and apprehensive when the temperature is at 102° or 103° F. At this time he is given ¼ grain morphine sulphate.

Kahler and Knollmeyer[5] in 1929 were the first to report the use of an electric light bath for the production of fever. They secured and maintained a temperature of 104° F., for approximately forty minutes in the treatment of general paresis and arthritis deformans.

Our cabinet is made in two sections and placed on the bed over the patient. We use sixteen 60-watt incandescent lamps mounted in the cabinet twenty-one inches from the patient's mattress. The cabinet was thermally insulated by blankets. Particular care had to be taken to insulate thoroughly around the patient's neck protruding from the cabinet. Once the desired temperature is reached the lamps are

turned off and the patient enclosed in the heat insulated treatment bag. It is rarely necessary to give a second application of heat when this method is used. The current is usually turned off when a rectal temperature of 105° F. is reached. Temperatures by this method are obtained about as quickly as with diathermy. An occasional fat patient seemed to be more comfortable in the cabinet, but the majority had a preference for diathermy. In spite of the freedom from any restraint, many were more restless than when wearing the diathermy electrodes. When diathermy is not available, this method can with care be substituted with safety. In all, twenty-nine treatments were given with the electric light cabinet.

Artificial fever was first produced by hot water baths. Much experimental work was done on animals before its actual clinical application in 1927 by Schamberg and Tseng.[6] Mehrtens and Pouppirt[7] published their clinical results in 1929 employing hot baths to produce fever. These workers were able to secure rectal temperatures of 105° F., and maintain them for two hours. Our technic varies slightly from theirs. We use a water temperature of 110° F. The patient's rectal temperature rises to 105° F. to 106° F. in fifteen to forty minutes. When the patient's temperature reaches the desired level, usually 106° F., he is placed in the heat insulating treatment bag. To maintain this temperature the treatment bag must be preheated to prevent a decrease in the patient's temperature on placing him therein. For this purpose we employ three electric heating pads. Thus for the first time we have been able to maintain temperatures of 105° F. or more for from four to eight hours by this method.

It is dangerous, however, to employ this method unless an electric indicating thermometer is used. Pulse, respiration, and rectal temperature are recorded every five minutes. An assistant keeps the temperature continually under observation when 104° F. is reached because from that point the temperature has a tendency to climb with extreme rapidity and one has to guard against collapse. While this is the quickest way to raise body temperature it is undoubtedly the most uncomfortable as well as the most dangerous. Until we knew the reactions of our patients to other methods we did not subject them to water. Some patients in spite of the marked discomfort preferred to battle it out because it meant a decided shortening of the treatment time. The quick temperature rise, lack of skin elimination, and hydrostatic pressure all tend to add to the patient's discomfort and occasionally give rise to abdominal cramps. Some patients did not tolerate this method at all and one patient continually tried to climb out of the tub. The immersing in hot water is probably much less desirable than either of the preceding applications. Thirty-one treatments were given by this method.

In 1931 Wilgus and Lurie[8] reported the use of electric blankets for the production of fever. We found the use of such a blanket a dangerous and hazardous procedure. For two years we have been experimenting to procure an electric blanket safe for use. While a great improvement in this direction has been made we do not feel that this is anything more than a makeshift method. The temperature of the bed should not exceed 120° F., at any time. This is the most uncomfortable and exhausting treatment so far described. It is the slowest method of inducing body temperature. The electric blanket may be used inside or outside the treatment bag and we have used both applications. When used inside the temperature rise is more rapid but usually the patient has greater discomfort and there is also some danger of blistering the skin. Fourteen treatments were given by means of the electric blanket.

We are not yet prepared to make any statement regarding ultrahigh frequency current as we are still experimenting with this method. We have given twelve treatments with this apparatus.

Four treatments were given in the infra-red cabinet but this proved to be very unsatisfactory and was finally discontinued as too dangerous. The patient's temperature fluctuated up and down all through the treatment.

Tables 1 and 2 give a summary of the treatments given by the various agents. We do not feel that there is any specific effect produced by the agencies employed other than their ability to raise body temperature. The therapeutic results obtained we attribute only to the fever produced.

TABLE I — NUMBER OF TREATMENTS GIVEN BY VARIOUS METHODS

Method used	Number of Treatments Given	Number of Patients Treated
Diathermy	25	11
Radiant Heat	29	11
Water	31	9
Electric Blanket	14	6
Ultrahigh Frenquency	12	6
Infra-red	4	1
Totals	115 treatments given	

TABLE 2 — NUMBER OF TREATMENTS PER PATIENT

2 patients received	12 treatments
2 patients received	9 treatments
5 patients received	8 treatments
1 patient received	7 treatments
1 patient received	6 treatments
1 patient received	4 treatments
4 patients received	3 treatments
1 patient received	1 treatment
17 patients received	115 treatments

Many patients during their treatment became quite nauseated. This has been attributed to the loss of chlorides by Simpson.[9] He recommended the use of salt in the drinking water in an attempt to replace this loss and thereby prevent the distress of nausea. We used a 0.6 per cent solution as suggested for drinking and this concentration is not distasteful to the average patient. While this did not eliminate nausea entirely it did prove very effective and of decided value. During the treatment patients should be encouraged to drink as much as possible. Pulse rate is a good index of the patient's condition and should not exceed one hundred and sixty per minute. The appearance of cyanosis is a signal for careful observation. A danger signal, less frequently seen, is the appearance of pallor around the region of the mouth. This may be the first warning of a possible vasomotor collapse. The respiratory rate is usually little changed, although it may occasionally rise as high as forty per minute. A marked drop in pulse rate is sometimes seen and this too is rather an unfavorable sign.

Dr. Markson of the arthritis clinic at Northwestern University Medical School has made a study of the comparative merits of an eight hour and four hour temperature curve of 104° F. (See Tables 1 and 2 in Dr. Markson's paper.)

CONCLUSIONS

1. Various agents used in the production of artificial fever are evaluated.

2. An artificial fever of 104° F., or higher maintained for four hours was induced in seventeen patients.

3. One hundred and fifteen treatments were given without hospitalization and with no danger to the patient.

4. A four hour temperature curve of 104° F., is less effective than an eight hour curve in the treatment of infectious arthritis.

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DISCUSSION ON SYMPOSIUM ON ARTHRITIS

Dr. Samuel J. Lang, Evanston: We have a smaller clinic at the Evanston Hospital than the one at Northwestern University, but our efforts fall along the same line. Some believe that acute rheumatic fever, rheumatoid or atrophic arthritis and osteo-arthritis are but different manifestations of the same disease process. We find it difficult to catalogue all cases of chronic arthritis into the type of a classification shown by Dr. Boyd, although we believe that the classification used by the New York group and described by Cecil is probably the best. Perhaps the allergic division as shown in this grouping could be included under the infectious type. A good many of these rheumatoid conditions are, we think due to bacterial allergy. It seems significant that some find streptococci in the blood stream in as high as 68% of cases. We find 20% positive blood cultures in our combined types of arthritis and several of these are among the so-called typical hypertrophic type. If streptococcus viridans has anything to do with the production

of arthritis, then it should also have something to do with the hypertrophic as well as the atrophic type.

Dr. Boyd spoke of the x-ray not being necessary in many cases. That brings up an experience of ours that was most embarrassing, of a woman who proved to have multiple myeloma, but had been treated elsewhere for chronic arthritis for months. This looked like a typical infectious arthritis. The x-ray helped to reveal the diagnosis in this case.

Dr. Arlon spoke of foci of infection. This is naturally a very important subject. However many are going about without teeth in their mouths but still having their arthritis. It seems that persons who have carried foci for number of years can expect little benefit from their removal.

We agree with the essayists that there is no single type of treatment for arthritis. General treatment must be undertaken. I have had no experience with hyperpyrexia.

Dr. Robert Lonergan, Evanston: I have been interested with Dr. Lang in this question of arthritis.

Dr. Lang brought up the question of classification and I wish to add a few words because I am out of sympathy with the usual ideas of classification. The literature has been confused by the enormous number of divisions and these have been reduced to a simple one and Goldthwaite's is generally used. However, Weatherby has quoted his series in which x-rays were taken on 50 consecutive cases of arthritis. He states that out of 100 per cent only 33 per cent could be defined as a pure type, about 57 per cent were mixed and about 8 per cent remained entirely unclassified or without x-ray changes. As a matter of fact it is very natural when you attempt to classify disease that treatment follows according to the different subdivisions you use. Actually in arthritis this is not the case. Treatment is very much interrelated in these different types.

It is very difficult to find a true text-book picture of atrophic or hypertrophic arthritis. After all, there is no more reason why we should assume there is a distinct entity because of joint pathology than there is for a skin man to classify all his cases solely as a dermatitis.

We have a generalized problem in arthritis and we have been in error in trying to classify the treatment of a general arthritis on the basis of different divisions.

I apologize for expressing an opinion because I am not familiar with the treatment by means of hyperpyrexia, but I feel that it has a very limited usefulness and is a rather drastic procedure.

Dr. Douglas Boyd, Highland Park: We owe a debt of gratitude to the orthopedists who have done most of the work on arthritis until very recently.

We certainly do not want to get into a discussion of the classification of arthritis. I do not think we will ever have a satisfactory classification until we find the reason why arthritis comes. I think that the best evidence that there are two fairly distinct types of chronic arthritis is the experimental evidence brought forward by Keyes of St. Louis who has reported in many papers an ability to produce an arthritis which has all the appearance of a degenerative or hypertrophic arthritis simply by trauma without introducing the element of infection. He has been able to produce in animals the infectious type or atrophic type, as I understand it, with trauma plus infection.

I think there is a good deal of disagreement in the question of blood cultures. I know Dr. Cecil's work has been questioned. The work which I have accepted as the best controlled work has been that which has come from Dr. Dawson's clinic in New York. They have not been able to repeat the work of Cecil and have not been able to find the high percentage of blood streptococcic infections that Cecil reported. I think there has been some question about the controls that Cecil reported in his work and I do not believe these reports have been generally accepted by bacteriologists.

We feel, as Dr. Lonergan stated, that the problem is probably much deeper than one of bacteriology. It is probably an indication of disturbed physiology. I think we are just scratching the surface when we do blood cultures and use vaccines. I think it is a problem of a generally disturbed physiology which is indicated in the many changes that take place. A study of the influence of diet, of the disturbed calcium metabolism, of the high vitamin diets proposed by Fletcher all seem to be steps in the right direction.

I feel the problem is very much as Dr. Cecil stated in a paper of his which appeared in the Journal of the American Medical Association about three weeks ago in which he said that this problem must be compared with the problem of syphilis or the problem of tuberculosis. We may be able to get better results if we treat these patients over a long period of time, very much as we do patients with tuberculosis.

Dr. A. J. Arlon, Chicago (in closing): I have nothing much to add except that Dr. Lang interested me in his statement that all arthritis was one disease. That may be true, but in the hypertrophic and atrophic types the pathology is diametrically opposed. In the atrophic there is negative calcium balance while there is a positive calcium balance in the hypertrophic type. There is a marked difference in the joints and the way the pathology comes about. There are many mixed types, of course, and sometimes one goes into the other. From a clinical standpoint the types are easily separated.

Dr. D. E. Markson, Chicago (in closing): Dr. Lang emphasized the fact that electropyrexia should be reserved for selected cases. In our paper, I believe, enough emphasis was placed on that particular point. Our work with hyperpyrexia was intended as a clinical research problem so that only well controlled cases were included in this series. It is probable that less severe arthritis should respond even better to this type of therapy and we are planning to treat such cases in the future.

An apathetic profession gave Europe its vicious form of health insurance. Is our profession to be so obdurate as to offer nothing better here?—James C. Sargent, The Milwaukee Medical Times.

ENDOCRINE DYSCRASIAS AND MENTAL DISORDERS

A PRELIMINARY REPORT

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Introductory. This is an interim report, covering the period November, 1930, to November, 1932, of certain precedures undertaken with the intention of determining whether there was a relationship between endocrine dysrasias and mental disorders and whether correction of the endocrine disturbance would be valuable in the treatment of mental disorders.

In its beginning this investigation was rather informal, but as experience grew it has gradually become better organized. It is only lately, for instance, that even a stenographer has been detailed from the institution. Previously notes on endocrine examinations have been taken in longhand by staff members. The work was entirely voluntary on the part of all concerned. For the staff it represented a large amount of additional work; for the extramural member it represented a contribution of his time and his own expenses. The only cost to the state was for materials used in laboratory work and for some medicaments. No pharmaceutical houses were asked to contribute material. Lately we have had some liberal contributions, but during the period covered by this report we used no materials except those purchased by the hospital and by patients' families.

The need for keeping down expenses has been a corollary of one of the principal motives for the study which was to reduce the cost of insane patients to the state.

An interesting angle of this investigation has been the cooperation obtained by Drs. Riley, Steinberg and Finkelman from patients' families. These staff members have had immediate supervision of this work.

1. BACKGROUND

That a relationship may exist between endocrine dyserasias and mental disorders is not a new idea.[1] A century ago, observations on thyroid deficiency included reference to the mental state. In 1912, Sir Victor Horsley urged the importance of posterior pituitary deficiency in the etiology of epilepsy.

Thyroid. The relationship of mental development and function to the thyroid is best exemplified by the cretin who seldom attains a mental age of more than 12, by the myxedematous patient who suffers a progressive retardation of his mental processes and by the victim of Graves' disease in whom the mental processes are greatly speeded up, many times to the point where an acute mania or psychosis occurs.[2] One patient, not included in this report, had his mental breakdown coincident with an exacerbation of Graves' disease; lobectomy was followed by a tremendous regeneration of that lobe and a great increase in the size of the other. There was corresponding increase in his mental excitement, which progressed to the point where he had to be confined. At operation, the thyroid presented the appearance of unrestricted growth and extended from high up in the neck to beneath the sternum. Its removal was followed by his return to a normal state.

Gonads. The relation of ovarian function to mental and emotional states is shown by the changes in the girl's emotional make-up and mental outlook at puberty, the emotional disturbances that many times accompany pregnancy, the psychosis that sometimes follows delivery and the changes that accompany the menopause.

That testicular degeneration commonly occurs in victims of dementia praecox has been commented on for many years. A few cases have been reported as benefited by testicular transplants.[3] It was necessary to castrate one of the cases in this series because of homosexual practices. No improvement in his mental state followed this and attempts at his former practices continued but with less vigor. The spirit was still willing but the flesh was weak, though he retained some power of erection.

Pituitary. The acromegalic is active, irritable and aggressive. Simmonds' disease is marked by mental retardation and lethargy.

Adrenals. Hoskins and Sleeper[4] recently called attention to the relation between suprarenal deficiency—as they diagnose it—and secondary anemia, which is a frequent finding

among insane patients. With the facilities at our command we did not feel like making a diagnosis of hypoadrenia in any of our cases. It might easily be that many of them were suffering from a deficiency of suprarenal function. The low blood pressure, the lackadaisical attitude, the apparent easy fatigability, the presence of secondary anemia, all suggest hypoadrenia.

Cushing[5] in his discussion of pituitary basophilism mentioned the tendency toward polycythemia. Moehlig and Bates[6] have gone into the relation of the pituitary to erythrocyte formation. Our experience inclines us to the belief that pituitary dysfunction, which is readily recognizable, has more to do with secondary anemia in these cases than does suprarenal deficiency. If the latter is present, it might easily be secondary and due to the pituitary deficiency.

However, the extramural member has under his care in the Illinois Central Service an engineer, sentenced to institutional care by a neuropsychiatrist, in whom a diagonsis of hypoadrenia was made and who is improving on treatment with eschatin. Hartman, Beck and Thorn[7] have called attention to the improvement in nervous and mental states under cortin therapy. The mental disturbance during some stages of Addison's disease is of course well known.

In this study, however, pituitary, thyroid and gonadal disorders have been the most common sources of trouble.

2. PROCEDURE

No patients were examined from an endocrine standpoint until they had been presented at staff meeting and their mental condition determined. Examination by some member or members of the staff ruled out non-endocrine conditions. Sign of endocrine dysfunction were sought for in statural deviation from normal, the relation of the upper to the lower measurement and of the span to the height; the condition of the skin, hair, nails and teeth. If obesity was present, its distribution was noted. The menstrual history was carefully inquired into. Laboratory work has consisted of a determination of the basal metabolic rate; the blood count, with particular attention to the differential; blood chemistry, particularly the determination of the non-protein nitrogen, urea, uric acid and calcium. It was rarely possible to secure an accurate 24-hr. sample of urine and so we usually had to be content with a single sample.

No biologic tests were made. While the hospital is in process of securing colonies of mice and rats, it had none during the period of this investigation. There was a rabbit colony on the farm, but the staff was too crowded with routine duties to spare anyone to make these tests. This was not regarded as a particularly serious handicap. It is felt that a diagnosis based on the exclusion of non-endocrine conditions and the inclusion of positive endocrine findings plus the laboratory work we were able to have done is as accurate as can be made at this time.

Cases were examined clinically, a tentative diagnosis was ventured, and laboratory work ordered at one visit. At the next visit the patient was again seen and the findings were reviewed in the light of the laboratory data. The tentative diagnosis was established or rejected and treatment ordered or the case dropped without any treatment as was indicated at that time.

Treatment. The pituitary products used were antuitrin and posterior lobe extracts. They were administered hypodermically three times a week in such doses as the patient could tolerate. Some patients could take only five units of posterior lobe extracts without considerable pallor and abdominal cramps. Others could tolerate twice as much without symptoms. The amount given depended on the patient's reaction, the dose being kept below that which produced unpleasant abdominal cramps. Antuitrin was given in doses of one-half to one cc., depending again on the patient's tolerance. Unpleasant reactions to this product consist of headache and vascular flush, and dosage was kept below the amount that produced this reaction. Results of this medication have been surprisingly good, as shown in Table 2.

Ovarian medication consisted of the residue or of one of the standardized preparations, more often the residue, one ampoule given subcutaneously three times a week. If a standardized preparation was used, it was given on alternate days beginning a week before the expected menstrual period. A few cases were given theelin over considerable periods of time. The results attending it were not sufficiently encouraging to justify the expense involved in its further use. Progynon has been used in a few cases,

both by mouth and subcutaneously. It seems to have had a particular and peculiar effect not only in its estrogenic property, but also in its general effect on the patient.

Thyroid has been given by mouth. There was some question as to whether all patients actually got the amount ordered, but this has lately been overcome and they now get what is ordered. We confirmed the experience of Hoskins and Sleeper[8] that some of these patients tolerate enormous doses of thyroid without disturbance. We have had a few who could use more than 30 grains a day without signs of thyroid intoxication. Thyroxin has never been used. We are not convinced that it is the whole thyroid hormone, and thyroid is much cheaper, less violent in its action and consequently much safer for use in this institution.

X-ray or diathermy was little used. The institution does not have a physician trained as a roentgenologist and there was some hesitancy about detailing therapy to a lay technician.

The progress of cases has been checked at intervals of three to six months. Some of them have been on treatment for more than a year. A few have shown considerable improvement, only to relapse while still under treatment. Others progressed for a while and then seemed to come to a standstill. A few have shown considerable improvement but grew tired of treatment. In every instance their wish to discontinue treatment has been acceded to. A good many still under treatment are greatly improved but do not appear among the discharges or paroles, which is the standard set-up for measuring the efficacy of this treatment.

3. STATISTICS

The following table (1) shows the totals of patients handled, with the number and percentages of discharges and paroles, divided by sexes and ages, so far as records kept are available.

Satisfactory information was not at hand regarding the treatment given all these patients; case record folders for all did not contain it. So far as it was obtainable, in 90 cases, types of treatment and results, as indicated by releases, are summarized in Table 2.

TABLE 1

	Total Patients Treated	Discharged	Per Cent.	Paroled	Per Cent.	Total Released	Per Cent.
Women — Under 45	95	17	17.9	8	8.4	25	26.3
Over 45	35	7	20.0	1	2.8	8	22.8
Total	130	24	18.4	9	6.9	33	25.3
Men — Under 45	42	8	19.5	5	11.9	13	31.4
Over 45							
TOTAL	172	32	18.6	14	8.1	46	26.7

TABLE 2

Endocrine Treatment	Women			Men		
	Total Treated	Discharged	Paroled	Total Treated	Discharged	Paroled
Pituitary alone	7	3	0	3	1	0
Ovary alone	16	8	1			
Thyroid alone	6	0	0	1	0	0
Lugol's and/or Thyroidectomy	3	0	0	0	0	0
Pituitary and Ovary	18	2	1			
Thyroid and Ovary	17	1	0			
Thyroid and Pituitary	10	0	0	2	2	0
Thyroid, Pituitary and Ovary	5	0	1			
Castration				1	0	0
Insulin, Calcium and Carbohydrate	1	1				
TOTAL	83	15	3	7	3	0

Total treated, 90. Total discharged or paroled, 21 or 23.3%.

The hospital population of insane in all state hospitals is shown for June 1930, and June, 1931, in Table 3. The state issued no report for 1932.

TABLE 3

Present in all Institutions — State of Illinois — Insane.

	June, 1930	June, 1931	Endocrine Clinic
Dementia praecox	12,920	13,314	108
Manic depressive	1,164	1,180	15
Involutional melancholia	257	229	13
Undiagnosed	658	756	12
Mental deficiency	1,185	1,227	9
Psychoneuroses	135	147	5
Psychopath. pers.	65	73	2
Postencephalitics	9	33	3
Without psychosis	930	987	3
Epileptics	727	712	2
	18,050	18,658	172

Total discharges and paroles from all state hospitals for the year ending June, 1931, are shown in Table 4.

TABLE 4

Total discharges and paroles in all state institutions year ending June 1931

Dementia praecox	1,217
Manic depressive	432
Involution melancholia	46
Undiagnosed psychosis	227
With mental deficiency	92
Psychoneurosis	110
With psycopathic personality	20
Postencephalitics	11
Without psychosis	1,017
Epileptic psychosis	54
(17.3%)	3,226

There are four patients, three of them out of the institution, who do not appear in this survey. Two were cases of dementia praecox. One was treated at her home, greatly improved, and we were hopeful of her eventual cure, i. e., improvement to the point where she could care for herself and help with the housework, when her mother was taken ill and treatment was discontinued. She is paroled. An amenorrheic praecox seen by one of the staff interested in this work was given progynon by mouth. Her periods were re-established and she was discharged in less than 90 days from date of admission. Another case of pituitary deficiency, the growth and sex hormone being involved, could be discharged except that he has no job and would be dependent on society just as he is now. The fourth case was the man with Graves' disease previously commented on.

4. DISCUSSION

The data obtained in this survey may be thus summarized:

1. At the Elgin State Hospital we have found a considerable number of patients in whom various endocrine dyscrasias may be recognized in association with their mental divagations.

No definite figures are presented on this topic. It is not considered necessary; the incidence of the more obvious endocrine stigmata—such as obesity, statural variations, dystrophy of skin and appendages, sexual impotence or menstrual disorder—is so obvious or so well known as to render complex statistical effort in our circumstances superfluous and burdensome.

The small number of cases of hypothyroidism has been a matter of considerable surprise. As the hospital draws its population largely from the Great Lakes Basin—a goiter zone—it was expected that this would lead all other glandular disorders in frequency.

2. We have found that we could relieve some of these endocrinopathies. The subcutaneous injection method was ordinarily used.

The difficulty of finding efficacious medicaments is gradually disappearing, thanks to the biochemists. This represented one of the largest items of actual cash outlay and we sought to keep it within bounds by using the unstandardized preparations.

3. Making all allowances, this survey, for its most important result, demonstrates that insane patients showing also evidence of endocrine dyscrasia have been improved with respect to their mental state in an appreciably greater proportion by the addition of endocrine therapy to the routine psychiatric procedures.

Of 172 patients recognized as having some endocrine defect, 26.7% are now paroled or discharged (Table 1), whereas the discharges and paroles from all the state institutions during the year ending June, 1931, were only 17.3% (Table 4). So that, any way this is viewed, this endocrine group has about 50% more patients out of the institution on discharges or paroles than is true of the general hospital population.

The data given above are not to be construed as meaning that endocrine therapy holds unrestricted hope of cure for hitherto hopeless forms of insanity. It does mean that correction of amenable endocrinopathies seems so far to have aided in the improvement of many of these cases. It does not mean that endocrine therapy

will replace the accepted psychiatric routine; it does mean that, where the evidence warrants, endocrine therapy should become a routine adjuvant to the psychiatric procedure.

It does not follow that because an individual has some mental disorder and is afflicted also with an endocrine dyscrasia there is necessarily any causal relation between the two, but the combination of endocrine stigmata with insanity is so numerous in Illinois institutions that it appears to be more than a matter of coincidence. The enthusiastic endocrinologist could interpret these results rather easily as meaning that we have found a cure for a considerable number of cases of insanity. The endocrine nihilist might argue that the treatment had been without effect and the results merely coincidental. The truth lies somewhere between these two extremes.

4. Paretics, postencephalitics, artiosclerotics and manic-depressives were considered as holding no hope for improvement from our restricted clinical viewpoint.

A few manic-depressives and postencephalitics were accepted in the first few months, but were thereafter excluded.

5. A limit of five years' residence in the institution was established as a maximum beyond which patients would not be accepted.

Our experience showed that patients immuned beyond five years—which is still only tentative and may be reduced to two years—are beyond hope of improvement within our field. Disorders of long standing, in the present status of our knowledge, are consequently not to be considered for future attempts at therapy, although a number of them were attacked and appear in the figures embodied in this report. It should be appreciated also, however, that a patient who has been institutionalized five years for mental disease associated with an endocrine dysfunction, has had the endocrine dysfunction, as he must have had the mental disease, in a pre-hospital form for a much longer period. Many cases, both of mental and endocrine disorder, for instance, have their inception at puberty or maturity, and develop only slowly to the stage where patient or family takes some definite action. However, available figures show that, of seven men accepted in the clinic who had been in the institution five years or more, not one was improved to the point of parole or discharge; and of twenty-four women, only one. Our funds are far too limited to permit expenditure in a group which at present offers so little hope of success.

6. It was found, and is our present belief, that the prognosis for most cases beyond age 45 is poor.

The figures given above indicate that a rather large percentage of cases over age 45 were improved. These cases were of menopausic disturbance, which forms the principal exception to the age limit rule.

5. CONCLUSIONS

Since January 1, 1933, the work has been reorganized with the definite object of treating endocrinopathies among these patients in the warranted belief 1, that the addition of such treatment to the hospital's ordinary procedures will raise its proportion of discharges and paroles, 2, that it will accomplish the further purpose of reducing the hospital's population and consequently lower the cost to the state of maintaining these patients, and 3, that some of the treatment may become applicable to cases in private practice and so become preventive so far as the state is concerned.

As a result of the observations made in the preliminary phase of this work and outlined in Part 3 of this report, we have set up the following principles of technique:

1. Only young patients, less than age 45 (except a few cases in the menopause) and recently admitted, are accepted.

2. Patients are subjected to the usual psychiatric and general medical examination by the regular staff of the hospital.

3. Without disturbing any psychiatric regime instituted and with all non-endocrine conditions eliminated so far as possible, those showing endocrine stigmata are sent to the endocrine clinic. Paretics, postencephalitics, arteriosclerotics and manic-depressives are, as above, excluded from this rule.

Endocrine stigmata considered by the ward officers are mainly: statural excesses or deficiency; disproportion between upper and lower measurements; dystrophies of skin and appendages; unusual hair-suit distribution or deficiency; peculiarities or excess or deficiency of pigmentation; obesity and its distribution; menstrual disorders.

4. The chosen patient is subjected to a general examination from an endocrine standpoint by the extramural member. Special studies—blood chemistry, blood count, urine

analysis and basal metabolic rate determination —are ordered at this examination, if recent ones are not already part of the patient's record.

5. The patient is seen at the next visit and a definite diagnosis made on the basis of the findings, considered in the light of the data accumulated previously, and a course of treatment outlined.

6. Check-ups are made at intervals of two to four months. The opinion of the doctor immediately in charge of the patient is solicited as to his or her condition. Henceforth the mental condition will be checked up by the staff every month. Treatment may be discontinued if improvement is not reported within a reasonable time, or if the patient or his family so desires.

By thus systematizing the work, we hope to make it more effective and even less expensive than heretofore. The rapid increase in endocrine data from research workers throughout the world will also undoubtedly add to its efficiency.

It is our hope that ultimately the state will see its way clear to establishing an endocrine ward or department at each of its major general hospitals for the insane, or even concentrate all endocrinopathies in one institution. The endocrine aspect of mental disease is certainly worthy of fuller investigation, and such centers could function as regional collection and publication points so that information gleaned in them could be distributed at medical meetings or in print to men in private practice. Such a policy should result in some preventive work being done where none is now attempted and should stimulate the interest of the general practitioner in this field of medicine. There is no doubt, at any rate, both from the data collected at Elgin and from other reports on the subject, that endocrine therapy offers definite promise of the alleviation of some cases of some forms of mental disease. A small section of so-called insanity undoubtedly will eventually be found due to endocrine dyscrasias and amenable to endocrine therapy.

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FOREIGN BODIES IN THE ESOPHAGUS*

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My part in this program is to tell how foreign bodies were removed from the esophagus before the esophagoscope was developed to its present degree of perfection. It took considerable ingenuity in those days, not only to devise a method of removing the foreign body, but to tell when and where it was present. The x-ray was in its infancy thirty years ago, and much had to be learned about interpretation of the x-ray plates. A few illustrative case records have been selected to show the methods in use at that time. Of course, such work is done now with an accuracy of diagnosis, and a refinement in technic that was not possible then.

It, perhaps, is well to occasionally go back in medical history and see how far we have progressed. It seems to me that we did very well before the esophagoscope came into use considering the handicaps, but it is also true that modern methods are a wonderful improvement and represent a great advance over the old methods.

The first case record selected for illustration was that of a small boy three and one-half years old. He had swallowed a jackstone on August 6, 1898, and was brought to my office in Averyville on that day. An examination failed to reveal any evidence as to the location of the foreign body. The youth of the patient prevented the obtaining of information which might have been obtained had he been older. He was sent to the St. Francis Hospital for observation, where he re-

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mained for four days. During that time he was carefully examined several times. There was no evidence of obstruction in the respiratory tract. The outside of the neck presented no abnormal enlargement. An examination of the throat with a laryngeal mirror failed to disclose any foreign body. He had vomited almost constantly, from the time the jackstone was swallowed until just before he reached my office, when the vomiting suddenly ceased. I concluded from this evidence that the jackstone had passed on into his stomach.

When he entered the hospital, instructions were given for him to be fed mashed, fried and baked potatoes which were to be followed with a full dose of cascara in the evening. While sitting at my office desk the next morning, I happened to look on the floor and saw a jackstone lying under the chair where the boy had been sitting the day before. It seemed reasonable to conclude that in the last attack of vomiting just before he reached my office, the jackstone had been expelled and had caught in his clothes in some way, and had then dropped on the floor while sitting in the chair. I tried to find out how many jackstones the boy had had originally in order to ascertain if they were all accounted for, but the father said he had either six or seven, and he could not remember which was the correct number, so we obtained no information from that direction.

After he arrived at the hospital, the Sister in charge said he ate a little mashed potato and drank milk freely. On the second day his bowels moved but he refused solid food. His throat was sore which was attributed to traumatism before the jackstone was supposedly expelled. On the third day his throat was much better, and on the fourth day he ate half a gingersnap and some banana in my presence, and swallowed the food without any effort. His father wanted to take him home and he was permitted to go with the understanding that he was to be brought back in a few days, if he had not entirely recovered. I have gone into detail concerning the little things that were observed, because that was the only way we had at that time for obtaining information.

When the boy was first brought to my office and again just before he left the hospital, I wanted to administer chloroform, the popular anesthetic at that time, and pass a bougie into the stomach, and make sure that the esophagus did not contain the foreign body as we hoped and had concluded. An anesthetic was necessary as the little patient was rather intractable. The parents objected to an anesthetic because they were afraid of it, and because they also thought, as I did, that the jackstone found in my office must be the one that had caused the trouble.

On the eleventh day after the boy had swallowed the jackstone, or a week after he had left the hospital, his father brought him back. He had eaten very little solid food until the eighth day, but from the eighth to the eleventh day he had persistently refused any solid food. He had, however, consumed quantities of watermelon and milk without any difficulty. His general health was excellent and he played around like a healthy boy. His father said his breath for three days had an odor "like when a person gets a tooth pulled, and a piece of gum sloughs off." The boy had also been a little hoarse from the time he swallowed the jackstone. We reasoned that this hoarseness was probably caused by pressure on the recurrent laryngeal nerve, and the foreign body must, therefore, lie above the arch of the aorta.

It was evident that we had not got rid of the jackstone as easily as we had hoped. The father had heard of the Roentgen rays and wished to have a skiagraph (which was what we called it then) taken, thinking the process was similar to photography, and also trying to avoid an anesthetic in the making of a positive diagnosis.

Dr. Dombrowski, a prominent eye, ear, nose and throat specialist, had the only x-ray machine in the city so we took the little patient to him. Dr. Dombrowski's machine was a little mica plate affair, turned by hand, and the doctor told the father that in order to get a shadow of the jackstone, the exposure would require fifteen minutes, and that a child that young would have to be anesthetized in order to keep him still that length of time.

When the father was told that the taking of a skiagraph would require an anesthetic, he decided to let me do as I desired. Dr. C. E. Davis was called to administer the chloroform. An esophageal bougie was passed into the esophagus about two inches, when it met with an obstruction. I then passed my index finger far down in the throat, and found I could just touch the foreign body. I passed a dressing forceps along my finger, and caught the jackstone several times but the forceps slipped off. I then took heavy hysterectomy forceps and grasped the jackstone. Strong traction combined with lateral movements succeeded in dislodging it. There was a little transient hemorrhage. Recovery was prompt, and in four days he was eating everything he desired.

The jackstone had been in the esophagus eleven days, with plenty of time for the rounded knobs to ulcerate through the wall. It makes my hair almost stand up now to think of the dangers involved, but I was considerably younger then than I am now, and probably had more courage than discretion.

Another case was that of a little boy twenty-two months old who swallowed a safety pin on February 12, 1907. The next day he was taken to Dr. Farnum, who was then practicing in Brimfield. Dr. Farnum had a little mica plate x-ray machine, and with the fluoroscope he located the pin opposite the second rib. The pin was open with the point downward.

On February 14, he was brought to the St. Francis Hospital, and under ether anesthesia, I passed the coin catcher down through the esophagus. As it passed down I felt the coin catcher strike a metallic object, and pass on by it. When the coin catcher was partially withdrawn, I felt the pin with my finger in the baby's throat. The coin catcher caught in the region of the epiglottis and the coin catcher and the pin were withdrawn with considerable difficulty.

The baby was sent home in two days. About the fourth day after he left the hospital, he developed a double pneumonia and a mediastinal abscess, which ruptured into the pleural cavity. Dr. Farnum resected

a rib and drained the pleural cavity. The baby's further recovery was uneventful.

The next patient was a woman fifty-one years old who, while eating her dinner on August 22, 1913, felt a sharp pain in her throat that persisted. That evening she came to me, and by passing my index finger far down in the throat, I could feel a piece of bone. With my finger as a guide I passed a sponge forcep down in the throat, and grasped the bone and removed it. It proved to be a piece of chicken bone, and the relief was immediate and permanent.

A girl fourteen years old, on August 28, 1917, was riding in a buggy and had a pin in her mouth. The buggy went over a rough place in the road when she accidentally swallowed the pin. At first it seemed to choke her, but after a short time it did not bother her in any way. After awhile it began to choke her again. This choking occurred intermittently, and she went to Dr. Perry B. Goodwin, who was then practicing in Summum, Illinois. The x-ray apparatus had been developed considerably by that time, and Dr. Goodwin took her to Lewistown where an x-ray plate, which was made by Dr. C. E. Howard, showed the shadow of the pin in the right side of the neck, about an inch above the clavicle. Dr. Goodwin then brought her to Peoria. A fluoroscope examination was made which showed the pin still lodged in the neck. Stereoscopic x-ray plates were also made, which I regret were destroyed a few years ago. I passed my finger into her throat and felt the pin attached to the anterior wall of the esophagus just beneath the glottis. I passed a bristle probang into the esophagus and withdrew it expanded. It brought the pin with it.

Another patient was a little girl five years old. On May 7, 1919, she accidentally swallowed a tin whistle, about the size of a twenty-five cent piece. It seemed to "stick somewhere in her throat." Dr. John Vonachen was called and that afternoon Dr. M. D. Spurck and he tried to remove it. They did not succeed and finally decided to have an x-ray plate made. The plate seemed to show the whistle in the stomach. It was decided to wait a few days and, if the whistle did not pass out of the stomach, it would be removed by a surgical operation.

On May 11, she was given some barium and water by mouth. Under the fluoroscope, the barium mixture was seen to pass into the stomach and seemed to surround the whistle. I was asked to remove the whistle the next morning.

On May 12, an incision was made through the upper abdominal wall. When the stomach was examined, to our great surprise we could not find the whistle. The duodenum was palpated and also the small intestines, cecum and colon. We did not find the whistle. The incision was closed with temporary sutures and the patient was taken to the x-ray department of the hospital. The x-ray showed the whistle in the left lower abdomen. The patient was taken back to the operating room and the incision reopened. The whistle was found in the sigmoid and it was pushed down into the rectum where it was removed through the anus, by an assistant.

It was evident that the whistle was in the transverse colon when the x-ray plates were made the evening before the operation, and either lay in front of or behind the stomach. We also learned then the lesson that later became known to the entire medical profession, that a foreign body that passes through the upper portion of a normal esophagus will probably pass through the entire gastro-intestinal tract.

A little girl four years old, on July 23, 1920, swallowed a small metal toy elephant. Dr. A. S. Plummer was called and thought that the foreign body would probably pass into the stomach and out through the rectum. He cautioned the family to let him know if any untoward symptoms developed. On July 25, the parents brought the little girl to Dr. Plummer and reported that she refused all food except a small amount of ice cream. An x-ray plate showed that the foreign body was lodged in the esophagus opposite the upper portion of the sternum just below the level of the clavicle. A rubber stomach tube met with an obstruction six inches beyond the lips, and would not go any farther. I could not reach it with my finger and was unable to grasp it with forceps with the patient under ether anesthesia.

We decided that we would have to perform an esophagotomy, so on July 26, an esophageal bougie was passed and an incision was made down to the esophagus. The esophagus was incised and by passing my finger into the incision, I could feel the upper edge of the foreign body. I made two or three attempts to grasp it with forceps when I felt it slip away and pass down beyond my reach. A bougie was passed into the stomach without any difficulty. The incision was closed, and a Kanavel stomach tube passed into the stomach. An x-ray plate showed that the foreign body was in the stomach. The patient was fed through the stomach tube for seven days. She made an uneventful recovery and passed the "elephant" from the rectum on August 5.

The last case to be reported may not fall within the limitations of the title of this paper, but it is so closely akin to it that it may be worth reporting. The patient was a young man, nineteen years old. While eating watermelon, on September 16, 1899, he accidently swallowed a sand burr, and said he could feel it stick in his throat when he swallowed. I could not feel it with my finger at first and a laryngeal mirror failed to reveal it. I finally passed my finger under the epiglottis and felt the sand burr just inside of the glottis. I could just touch it with my finger. It was a problem to devise a way to remove it. At last I took a dull uterine curet with a long, flexible shank and bent the shank to suit my purpose. I passed the curet to the burr with my finger as a guide, and manipulated until the burr lay in the fenestra of the curet. With careful traction I drew the burr out from under the edge of the glottis, until my finger could hold it firmly in the fenestra of the curet. It was then easily removed.

It was fortunate for us in those early days, that the narrowest portion of the gastro-intestinal tract is in the upper portion of the esophagus. The histories of the above cases show that we frequently obtained information of the presence of a foreign body by being able to

feel it with the index finger passed far down the throat. There were two instruments that aided us very much in the removal of the foreign bodies. One was called a bristle probang. The instrument was passed into the esophagus below the foreign body with the bristles extended. By pulling on a rod going down the center of the shaft of the instrument, the bristles were expanded like an umbrella. Then the instrument was withdrawn, and would frequently bring the foreign body with it. The head of a pin or a piece of bone would very likely be caught in the bristles and be removed.

The other instrument was called a coin catcher. It consisted of a small triangular bucket with a rod attached to the bottom of the inside of the bucket by a swivel joint. The triangular shape of the bucket permitted it to pass below the coin in the esophagus, and when the instrument was withdrawn, the open top of the bucket would catch the coin and bring it out.

Of course we worked in the dark with these instruments and they were not exact or precise. They have been justly superseded by the esophagoscope, with its accompanying instruments of precision. The x-ray is now a wonderful aid in giving the location and dimensions of the foreign body.

I read an article in a surgical journal a few days ago that Kussmaul, in 1868, was the first to realize esophagoscopy by passing a rigid straight tube down the esophagus of a sword swallower of Freiburg, and Mikulicz, 1881, showed that esophagoscopy was a feasible procedure, but for the next thirty-five years nothing much was done about it. While the esophagoscopists were deciding what to do about it, we went ahead, and did the best we could with the instruments at our disposal.

FOREIGN BODIES IN THE ESOPHAGUS*

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It is the purpose of this paper to emphasize briefly the more important present day methods of diagnosis and removal of foreign bodies in the esophagus. These will be illustrated by a summary of fifty consecutive cases from the writer's practice. No attempt will be made to enter into any great detail in this paper.

History. When a patient presents himself to the physician, either in his office or at the hospital, he usually gives a history of a vague sensation, a discomfort or some difficulty in swallowing. He may or may not give a history of swallowing a foreign body. The physician must then ask himself and answer:

1. Is a foreign body present?
2. In which part of the esophagus has it lodged?
3. Is an esophagoscopy indicated?

A subjective sensation of foreign body may be constant, but more often it is present only on swallowing. Painful swallowing, inability to swallow or drooling may be present or absent. If there is pain, it may be substernal or extend through to the back. If the foreign body is sharp, it may cause pain or pressure over the site of the point or by pressure over the opposite side of the neck. Thoracic foreign bodies may, for a time, cause only a discomfort above the sternal notch.

Excessive salivary secretion and drooling are associated with impaction and consequent occlusion of the esophagus. This secretion frequently overflows into the larynx and may be the cause of pulmonary disease.

Coincident esophageal disease must always be considered when a foreign body is arrested in the esophagus. Trauma, laceration, ulceration, acute or chronic esophagitis, spasmodic, congenital or acquired (lye, etc.) stricture, stenosis caused by compression of mediastinal growths (tumors, glands, etc.), aneurysm, diverticulum, esophageal neoplasm (malignant or benign), varix, paralysis, hysteria and other diseases, may be an underlying cause for the arrest of the foreign body.

Fluoroscopic Examination. The problem for the roentgenologist is the location of the radionopaque foreign body rather than that which is radio oqaque. It is simple to determine that a coin, a disc or an open safety-pin lies with its greatest diameter in the coronal plane of the body and that, if it were in the larynx or trachea, it would lie in the sagittal plane. Other objects may require a lateral or oblique position in fluoroscopy to determine with certainty whether they are in trachea or esophagus. A

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few swallows of some opaque mixture would settle the diagnosis at once.

To determine presence and location of radio non-opaque foreign bodies, sometimes a thin barium or other mixture and at other times a very thick mixture is required. A capsule, 5 to 15 grains, filled with opaque mixture will at times be arrested, momentarily at least, when the ordinary mixture would pass on with little or no hesitation.

Most foreign bodies are arrested at the upper thoracic aperture where there is a physiologic narrowing.

Roentgenograms. Roentgenograms may then be made with or without opaque mixture, either as a liquid or in capsule. Any evidence of associated esophageal disease may then be recorded in one or more plates for present or future study. Urgent cases may be met in which there is no time for fluoroscopy or roentgenograms. An esophagoscopy must be done at once.

Esophagoscopy. After taking into consideration the history, the fluoroscopic and roentgenological findings, then it must be determined whether or not an esophagoscopy is necessary, whether or not the patient is in condition to esophagoscope. A patient in shock or with a very high temperature and critically ill, is a bad risk. It is best to wait until the danger has subsided. There may have been "blind and ill advised attempts at removal." Either such attempts or the foreign body itself may have caused a traumatic esophagitis, septic mediastinitis, a cerval cellulitis or a gangrenous esophagitis. In any such case removal of a small foreign body would be next to impossible until some of the edema, swelling, etc., had subsided. However, the foreign body must be removed as soon as possible. When removal of the foreign body has been decided upon, only the direct method with electric lighted esophagoscope guided by the eye is worthy of any consideration. Any blind methods are fraught with great danger.

Removal of foreign bodies by other methods. Blind bougieing, or blind passage of any instrument into the esophagus is extremely dangerous as has been mentioned. Since there may be a coincident disease of the esophagus or adjacent organs as the cause of arresting the foreign body, such methods frequently produce more damage than the foreign body itself.

External Esophagotomy has never been performed at Chevalier Jackson's Clinics. If the foreign body has passed from the pharynx into the esophagus, it may be removed over the same channel or pass into the stomach. The mortality of external esophagotomy is from 20% to 42%, while that of esophagoscopy is less than 2%. Such an operation is only useful in the cervical esophagus. Cases have been reported in which the foreign body has passed below the cervical esophagus during general anesthesia and, therefore, not found at operation.

SUMMARY OF CASES

Fifty consecutive cases of foreign bodies in the esophagus are summarized.

RADIO NON-OPAQUE FOREIGN BODIES

Type	Cases	Ages of Patients
Food (general)	3	25 to 39 years
Meat	2	61 to 72 years
Toast	1	50 years
Cracker	1	27 years
Wood	2	5 and 19 years
Popcorn (husk)	2	27 and 54 years
Apple seed (husk)	1	36 years
Prune seed	1	33 years
Grapes (whole)	1	60 years
Beef bones	2	45 and 49 years
Pork bones	2	18 and 46 years
Chicken bones	8	17 to 65 years
Fish bones	7	22 to 58 years
Glass	2	30 and 48 years
Porcelain	1	53 years

RADIO OPAQUE FOREIGN BODIES

Type	Cases	Ages of Patients
Marble	1	9 years
Badge (pin clasp)	1	10 months
Overall button	1	2 years
Can opener	1	4 years
Clock key	1	2 years
Carpet tack	1	29 years
Coins (penny)	4	2 to 3 years
(nickel)	1	2 years
Open safety pins	3	9 to 24 months

DURATION OF SOJOURN OF FOREIGN BODY IN ESOPHAGUS

1 to 6 hours	14 cases
7 to 18 hours	10 cases
1 day	8 cases
2 to 5 days	10 cases
1 week	1 case
2 weeks	2 cases
6 weeks	1 case
3 years	1 case

X-RAY EXAMINATION DEMONSTRATED

Spasm in 20 cases
Stricture in 5 cases
Occlusion in 2 cases
Negative in 13 cases

FOREIGN BODIES WERE ARRESTED IN

Cervical Esophagus in 32 cases
Middle Thoracic Esophagus in 2 cases
Lower Thoracic Esophagus in 3 cases
Not localized in 13 cases

CONDITIONS FOUND AT ESOPHAGOSCOPY

Laceration or abrasion	17 cases
Laceration and stricture	4 cases
Laceration and perforation	2 cases
Laceration and ulcer	3 cases
Perforation (small or large)	7 cases
Ulcer	4 cases
Stricture	3 cases
Stricture and carcinoma	1 case
Esophagitis, acute	2 cases
Suppurative mediastinitis, etc.	2 cases

REMOVAL OF FOREIGN BODIES

Foreign bodies passed into the stomach in 12 cases
Foreign bodies removed by esophagoscopy in 38 cases

SUMMARY OF CASES

It seems logical to conclude, as others have done, that more than 80% of the cases of foreign body in the esophagus are due to carelessness on the part of the patient. Very young children play with many sorts of small objects which should not be within their reach. Too frequently these reach the mouth and are either aspirated or swallowed. The toothless age, with "artificial hard palates," have little sensitiveness to bones and other objects which may become foreign bodies. Those people from 20 to 40 years of age are either in too much of a hurry or are just careless. And lastly, some few cases have a definite coincident pathology in the esophagus.

CONCLUSION

1. We should always remember the possibility of a pre-existing esophageal disease when a foreign body is arrested in the esophagus.

2. Blind probing and blind methods of attempting removal of foreign bodies from the esophagus are fraught with great danger. They should be excluded forever from our armamentarium.

3. Foreign bodies in the pharynx must be skillfully delt with for fear of complicating a simple case and forcing the foreign body downward into the trachea or esophagus.

4. Fluoroscopy and Roentgenograms are the only reliable methods for localizing an Esophageal Foreign Body before esophagoscopy.

DISCUSSION ON PAPERS OF DRS. COLLINS AND SNELLER

Peter T. Spurck, (Peoria, Illinois): I certainly enjoyed Doctor Sneller's paper immensely, relative to the advance in bronchoscopy in the last few years. I know of nothing that is of more importance to the internist or to the general practitioner, who has a patient that has swallowed some foreign body, than to feel he can rely upon a competent bronchoscopist to remove this foreign body in a rapid and efficient manner and thus avoid fatal results.

We have learned that during the routine x-ray examination of a foreign body, if there is any question of whether this foreign body may lie in the esophagus or in the upper trachea, this can be differentiated by placing the patient in a semi-lateral position, and the swallowing of an opaque barium meal will readily disclose whether there is an obstruction in the upper esophagus.

We have also used Iodeikin capsules which on account of their intense opacity could be easily visualized at any of these obstructive points.

I think this paper was very timely.

Dr. G. A. Dicus, Streator: It was gratifying to me recently when a ten months old child was brought to the office after swallowing a kernel of corn. It went not into the esophagus but the trachea. I brought her to St. Francis Hospital, and it was very satisfying to see how Dr. Sneller removed that grain of corn.

Carl Black (Jacksonville): These are very interesting papers and very important. I would not have anybody think for a minute I don't appreciate the advancement which has been made in this field. However, in these days, when we are reading so much about George Washington's beautiful teeth made by Greenwood, how he carved them out of ivory, I call your attention to the fact that surgical literature shows at least five cases where individuals have swallowed their teeth which passed completely through the gastro-intestinal tract. We should not be too much excited. The family is excited and the patient is excited but it is no time for the doctor to be unnecessarily excited except for the one thing that he might be cheated out of a job.

Maurice I. Kaplan (Chicago): I wish to call to your attention a method we have been using at Mount Sinai Hospital, Chicago, for the localization of foreign bodies and other lesions of the esophagus. The method I am about to describe has taken preference over the capsule method that we had used for a number of years. The stock mixture of equal parts of chocolate malted milk and barium sulphate (by volume) which is kept on hand for other barium studies, is used. A thick paste is prepared using two tablespoonfuls of water and two tablespoonfuls of the barium malted milk mixture. This paste is spread on one graham cracker, another cracker is placed on top of this and a sort of a sandwich is had, similar to the ice cream sandwiches sold in the streets. The sandwich is allowed to stand for a short time while the moisture is absorbed and the sandwich is ready for use. The patient is told to take several bites and chew this real well and swallow, after several bites have been chewed up and mixed with the saliva of the mouth. I find that this method produces a mass that goes down very slowly through the esophagus and sticks to the wall of the esophagus much better than the capsule and an ordinary thick barium paste. It is easier to handle in the dark fluoroscopic room; no messy spoons to be poked around in the dark to find

the patient's mouth and the patient likes this mixture much better than the paste.

I have found on several occasions that the capsule will go down while the sandwich of the barium and graham cracker will stop and outline the foreign body or bring the lesion to view.

There is a drawback in the use of the sandwich in the edentulous patient. These patients who have no teeth can easily soften the mixture by munching slowly and then swallowing. We have used this method at The Mount Sinai hospital for some time and I recommend it to all of you, until some day an enterprising baker will incorporate the barium in a cracker and put it on the market so that one can keep a supply on hand and feed these to his patient with water and use it instead of the messy barium powder mixtures.

Dr. Collins (closing the discussion): As I stated, my purpose was to show you how we removed foreign bodies in the esophagus in the early days with the crude instruments at our command. Every practitioner in this part of the state breathed a sigh of relief when Dr. Sneller came with his instruments and showed his skill and ability to use them.

Dr. Sneller (closing the discussion): Dr. Spurck brought out an important point about the use of opaque mixtures in differentiating between foreign bodies lodged in the trachea and those lodged in the esophagus. In a case of foreign body in the trachea, any opaque mixture which is swallowed, naturally would not be arrested by any foreign body if it were not in the esophagus. Therefore, the conclusion would easily be made that the foreign body was not in the esophagus.

Dr. Black mentioned the fact that we should not be in a hurry. A good many cases come into my office with a history of foreign body in the esophagus and have some difficulty in swallowing. If there is no apparent urgency, I wait a few hours to a few days before deciding upon an esophagoscopy. However, with most larger foreign bodies, particularly those with sharp edges and points, I do an esophagoscopy shortly after a careful x-ray study of the case has been made. If such foreign bodies are not removed early, they will lead to ulceration, esophagitis, or even at times, to a mediastinitis and then they may have a fatal outcome.

An example of such a case: A patient, 9 years of age, swallowed a marble. It became impacted in an old lye stricture. There had been some manipulation before the patient had come to the city, but poor circulation in the stricture, in the presence of the impacted foreign body, and also in the presence of infection, brought about a serious complication within 24 hours after the onset. In spite of removal of the foreign body, the patient died at the end of five days with a gangrenous mediastinitis and a left chest full of pus.

External esophagotomy, in Dr. Collins' hands, was remarkably successful. Yet the mortality throughout the country is from 20% to 42%. The foreign body may slip downward before the operation is completed, and, therefore, such a serious operation will be useless.

I believe Dr. Black is absolutely correct about waiting for some foreign bodies. When an open safety pin is in the stomach we may wait, but if it is lodged in the esophagus for 12 to 24 hours and has not moved, I believe it should be removed by esophagoscopy under the guidance of the eye and removed early.

Dr. Kaplan's idea, I think, should be followed by at least some of the Roentgenologists.

RELATION OF THE HEALTH OFFICER TO THE COMMUNITY*

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This subject was accepted by the writer with the idea of trying to codify present ideas rather than to attempt to propound any new theories.

Many papers are written on the subject of "The Relation of the Health Officer to the Physicians," which limits very much the scope of the discourse. This subject must, however, include the practicing physicians, because they form an integral and important group in any community. In fact they form the most important group in the community with which the health officer has to deal. Many whole time health officers look upon their communities as composed of groups, and analyze their problems with reference to the welfare and needs of these groups. I knew a health officer, who a few years ago, was invited to leave his community, where he had been quite successful, to become health commissioner of a larger city, at an increased salary. He was offered a contract for only one year, but demanded at least a three year tenure, because, as he said, at the end of one year he would just be getting a comprehensive grasp of the population complex or the community background, and the real needs of the community, and how best these needs could be attained.

This health officer was absolutely right in weighing in the balance his present success and reasonable security of position, against an untried field of endeavor, even with increased pay, but an unsuitable and unfair tenure of office. Suffice to say this man was given a three year contract, made good in the new field, but needed the entire time to reorganize, harmonize, and coordinate the various groups and build up an efficient health department. Therefore a reasonable tenure of office is among the first considerations that a community owes its health

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officer and also itself. All this, of course implies that the health officer shall be worthy of the confidence and trust imposed in him.

We often listen to papers read at our health meetings, in which the author is extolling the virtue of some health practice he has developed in his community. To him its development may have been comparatively easy, but we leave the meeting wondering how we could possibly accomplish the same thing in our own community. We seriously analyze all factors and decide that for us, our time, energy and money can accomplish much more in an entirely different field of endeavor. His may be a wealthy suburban community, in which the sanitary problems have all been solved, including the water and milk supplies. Such people are apt to be highly intelligent, with a consequent low birth rate and low infant mortality rate. These people can be expected to have instead a so-called high "girth" rate, with a consequent high adult sickness rate, due to the stress of living as well as the effects of luxury and ease.

Manifestly this health officer's sanitary duties would be one of mere routine to check standards occasionally. He probably would turn his attention to health promotion in the schools and high schools, to the periodic health examination, the development of special clinics, such as heart, mental, cancer, etc. He would, of course, also attempt to control the communicable diseases, and recommend the various up-to-date immunization procedures. But in all this could any one imagine the idea of gratuitous services to the public or from the physicians, in this type of community. Here free services would seem an absolutely foreign thought, and that all these problems would have a much different approach here than in some other community. This health officer might, conceivably, have to deal with problems that most of us know little about, such as a large Christian Science group, or the followers of chiropractic, physical culture or other groups or cults, that frequently infest, like a disease, the so-called intelligentsia. In fact most health officers may not be able to adjust themselves at all to this type of community. It may require a man of special temperamental fitness to make a success here.

On the other extreme a community may be so backward in sanitary progress, or so poor, that the fundamentals of sanitation may be major health problems for a number of years. The racial make up, the type of industry, climate and many other things may be weighty factors. All these will determine the health activities advocated and the approach to their solution. Here the free dispensaries and clinics may be necessary if any progress is to be made in saving human life.

Even within large cities, containing all kinds of groups and classes, special problems are solved in different ways. New York city solves its diphtheria immunization problem somewhat different from that of Detroit, and Chicago has yet another way. Dr. Vaughan of Detroit stresses the house to house canvass of the public by many nurses for several months, and the payment of the physicians by the health department for those who can't afford to pay. He also succeeded in stimulating, by special courses of lectures, the public health consciences of the physicians in the control of communicable diseases. In other words he fostered and bettered the relations between himself and his department and the physician group of his community. Dr. Bundesen of Chicago, while stressing this feature also, yet found it necessary, to reach a large special group, to enlist the aid of the Catholic clergy, and to establish free clinics and to even organize traveling clinics to go to the very homes of these people. All this seemed necessary to get past the resistance, suspicion and poverty of this group.

Dr. Gillespie of Peoria has abandoned free toxoid clinics—the phyicians in his city having agreed to cheerfully immunize all who come, charity as well as pay, so that the free clinic is unnecessary. In one small city the school children were prevailed upon to bring to the school as much of a standard fee as their parents could afford. The total received amounted to an average of fifty cents each. This was paid to the physicians and a very high percentage of the grade school children were immunized to diphtheria. But this does not reach the preschool group, which it is most important to reach. In the community of the writer, by agreement with the physicians the health department immunizes in preschool clinics, but pays the physicians to immunize the school groups for both smallpox and diphtheria. And so the methods vary almost ad infinitum.

The health officer has a great responsibility in his community and to his community. If no epidemic of devastating importance occurs the community is considered fortunate; but if one does occur some one must be blamed, and it is always the health officer. His foresight must equal his aftersight. In fact he must continually foresee and forestall to maintain his status quo. And unless he is a good advertiser or has a good press agent, the public may never appreciate his valuable services.

An illustrative case occurred in an eastern city a few years ago. In this city there were signs for many months that all was not well with the city water supply. Finally a terrible epidemic of typhoid fever occurred causing hundreds of cases of illness and taking many lives. There also remained as an aftermath, more than twenty typhoid carriers and numerous persons with impaired health, so that damage suits and judgments against the city ran to nearly two million dollars. Sure the health officer was dismissed for failure to recognize the signs, to foresee its results, and to take proper preventive measures. An interesting fact in this connection was that the county health officer lived in this city, had authority over the county, but not over this particular city of the county. He recognized the danger, warned the local department, and boiled the water used by his own family. He was severely censured after the epidemic, because he had not become a crusader, cried his message of warning from the house tops and forced some attention to the matter. But if he had, how about his meddling if the epidemic had not occurred? Needless to say that the law governing county health departments in this state was changed, giving the county health officer authority over such matters in the future.

Therefore, it is apparent that the prevention of disease is still the first duty of a health officer to his community. This not only includes the so-called communicable diseases, but all other diseases that harrass mankind and destroy his happiness and his life. This may well include the allied field of health promotion, for this is nothing else than the teaching of how to develop and maintain a sound and vigorous body for as long a period as possible, and therefore to limit or prevent disease. This does not mean that the health officer and his staff shall ruthlessly enter any given community and by ordinances, or by arrogance or aggressive measures disregard established habits or customs of that community. It does mean, however, that by his very position in the community he must endeavor to accomplish definite good. This is especially encumbent and expected of him where disastrous epidemics may occur or the health and lives of many people may be endangered. There are times when the rights of the people as a whole transcend the rights of any particular group of the community.

The purification of the water supply and the requirement for the abandonment of private wells, a milk pasteurization ordinance, or the adoption of any new sanitary ordinance will offend certain elements or groups, but is necessary for the common good. Likewise the adoption of adequate measures to immunize the public against smallpox and diphtheria may offend other groups, including the medical profession, or only certain members of it. Usually some agreement can be arrived at, but it is exceedingly difficult to satisfy every single member of any group. The majority is, however, usually fair, and the majority should be satisfied before any program is carried out. Sometimes the health officer can make haste by going slowly and allow for changing opinion within objecting groups, yet some of this work must be done. In the case of immunization it must be done either by the physicians, or by the health department or by a cooperation of both, or in time the health officer must answer to public opinion for the failure. This is true of other measures for the public welfare—the health officer must somehow get it done or answer to public opinion sooner or later. Therefore the health officer needs the sympathy, patience, cooperation, and encouragement of all groups in the community, to the end that the whole community may progress in public health.

Less urgent, however, is the public health education of the masses, special groups, and in the schools; but extreme caution, tact and care is here necessary. Too many health articles or radio talks or too much usurpation of the rights of the school teacher to teach health in her own way, may well tread on too many toes and center too much enmity on the health officer at one time for him to withstand. I once knew an enterprising, but aggressive health officer in

a fairly large mid-western city to lose his job because of too much publicity. It is better to submerge oneself somewhat behind the active public health groups of a community than to stand out in front too much, I do not mean to say that public health education is not important, but it is better for him to face always in the right direction, as he understands the right, and be content with few converts at a time. Gradually, if he is right, whole groups will swing to his side, and his program will be accomplished. I have seen it take two or three years or longer for superintendents of schools to consent to alter school curriculums to include some idea of the health commissioner, or for school teachers to change from luke warm to enthusiastic advocates of certain health practices or teaching. Likewise for medical societies to agree to an adequate immunization program, or for councils to pass a milk pasteurization ordinance, etc.

It now becomes apparent and manifest, that if a community is to get the maximum health benefits, its health officer must be specially trained. He must be able to read the signs of impending epidemics, and know how to take the proper action. He must be able to gather vital statistics, analyze them, and direct special attention in the direction of greatest need. He must be able to cooperate with the component groups of his community, and skilfully direct their mutual relations for the best interests of themselves and for all, and if certain diseases are to be still further reduced in prevalence, and the public health further promoted, long time and careful planning for his community is demanded.

No general practitioner can adequately or properly do all these things, without special aptitude, thought and training, no more than he can adequately care for the eye, ear, nose and throat specialty without special training. Public health is a specialty just as much as any other specialty, and to get the best results a whole time, specially trained man should be in charge. More communities should therefore demand trained, whole time health officers, and where these communities are too small to justify the expense, provision should be made for combinations of communities, so that trained supervision can be employed.

People's habits and customs can not be changed over night. "Evolution and not Revolution" should be the motto. Many times in our schools, parent teachers associations, women's clubs, and other groups we must educate and reeducate. Public health like medicine constantly changes, new knowledge is born, and new emphases must be placed here and there, and it takes special study and constant application to keep abreast of this field.

One of the chief difficulties and criticisms, by our various groups, is our inability to show rapid and demonstrable results. Against all this a health officer needs to be fortified with facts and figures covering periods of years, rather than single years, and by a knowledge that he is proceeding in the direction advised by experts in the public health field. Vision, knowledge, perseverance, patience, tact and fairness to all groups, are all important assets of a health officer in relation to his community.

SUMMARY

As a background to serve a community, the health officer must understand the population complex and the component groups of his community.

He must then select his program to best serve the needs of his particular community. Even the approach to similar programs may differ radically in different communities. What may be mere routine in one community may of necessity be a major program in another.

The health officer has a great responsibility and he needs the sympathetic understanding and hearty cooperation of all groups in his community.

The health officer is a specialist in a special field. He must recognize signs of impending epidemics, and plan long time programs. For this reason he needs a reasonable tenure of office.

He of all men needs a rare combination of vision, knowledge, courage, patience, tact, and a fine sense of fairness to all groups of his community.

DISCUSSION

Dr. E. S. Gillespie, Peoria: In discussing Dr. Ailes' paper it seems appropriate to consider the relationship of the Health Officer and the City Health Department with the health instructions and health supervision of the child, or the School Health Service.

My study of this subject has convinced me that the health supervision of the school child, like all other ages, rightly belongs to the Board of Health, and that the health instruction rightly belongs to the Board of Education. Teachers are equipped by experience and

training to teach health and hygiene. Health Officers are convinced that the health department is better equipped to give health supervision because they furnish a 24 hour service 365 days each year, as compared with a 190 to 200 days of 6 hours each in the schools and the Board of Health is held responsible for the health supervision of all the citizens in the community.

I want to quote a few paragraphs from a report of Dr. James Roberts of Hamilton, Ontario, outlining the way the amalgamation was handled in that city.

"In looking back over recent years of my experience as Medical Officer of Health, I find the discussion as to whether medical inspection of schools should be under the supervision of the Board of Health or Board of Education to have been of annual, nay, even of perennial interest. At times reasonable and dispassionate, the argument has occasionally waxed warm and even acrimonious.

"Permit me at the outset of my remarks to call your attention to a fundamental consideration which has not been sufficiently emphasized in the presentation of our problem to those who are not nurses and doctors, but which is of paramount significance to a proper conception of what school hygiene, looked at from a broad and really worth while viewpoint, comprehends. We refer to the difference between 'health supervision' and 'instruction in health'. The former, for the infant, preschool child, school child, adolescent, and adult is preeminently the duty of the official health department. The latter is the function of the educational authority. To except the school child arbitrarily from any comprehensive program of the Department of Health can be defended on no grounds nor by any process of sound reasoning. Health instruction is the business of the Board of Education. Health supervision and protection is the responsibility of the Board of Health and the Medical Officer of Health. . . .

"Both academically and strategically the teacher is better equipped to carry on the teaching of health and hygiene in the schoolroom than the nurse. . . . Not only would I insist on the school authorities seeing that the teacher's training is adequate to insure that this type of instruction shall not be carried out in a perfunctory or half-hearted manner, but that in all the educational curricula of the country the teaching of health and hygiene shall be so incorporated as to invest them with the importance which their influence on the future of our citizenship demands. . . .

"Corrective physical education has become as indubitably and acceptedly a part of the school program as manual training, vocational guidance or domestic science or any other of the so-called fads which once upon a time aroused alike the criticism and the deprecation of the taxpayers. Corrective gymnastics, postural exercises, orthopedics, rest, nutritional clinics, sun baths, open air schools, etc., have become indispensable adjuncts in our efforts to insure the ability of the child to attend school and to make the most of his educational opportunities. In the evolution of reorganization of existing school health services, whether under the Medical Officer of Health or School Medical Officer as the case may be, these services are essentially medical as to their establishment and successful maintenance. . .

"The Medical Officer of Health takes the stand, logical and convincing to himself, no matter how irrational it may seem to others, that the necessary visits to the school in connection with the control of communicable diseases offer exceptional opportunities at the same time for search and investigation into the causes which later in life lay the foundation for physical and mental ill health, and that inasmuch as the schools have the children under observation for only 5 to 6 hours per day and for only 195 of the 365 days in the year, any program of health supervision undertaken by the school authorities must of necessity be partial, isolated and in most cases illy coordinated with the scheme of preventive medicine which is in operation throughout every day in the year, and which, moreover, is often responsible for some of the best and most intensive efforts of the Health Department during those months of the year when the school health service, no matter how urgent the necessity, has entirely ceased to function. It is obvious, therefore, and to every one, that where health work, even to the extent of overlapping the work of the Health Officer in the control of contagion is carried on, that official becomes legally responsible for any miscarriage or neglect of duty and must not only carry on a campaign against infections in the public schools but as is the case in this city at the present time, must organize and carry on a similar crusade in the private and parochial schools. . . .

"We are, in fact, at the present time, and have been for some years past, in the anomalous position of providing a dental service for both public and parochial schools, a nursing service for the control of communicable diseases in both classes of schools and a service for the correction of physical defects in the home, or, in other words are carrying on a generalized nursing service covering the entire area of the city. . . .

"Just here it would seem opportune to say a few words setting forth the advantages of such a nursing service. Accompanying my report is submitted a map showing the nursing districts which after due regard to density of population and other details necessary to be considered would, in our judgment, be adequate to insure the successful working out of the proposed amalgamation. These districts are so arranged that the district nurse in each case may take care of all children, school and preschool in her area, not only with respect to her work in the schools, but will be able to assume responsibility for attendance at clinics and to follow up work in the homes. Contacts from contagious diseases and absentees from schools on account of presumptive contagion or other disabling causes can be visited without overlapping, as the district over which any particular nurse assumes health supervision contains all that portion of the city from which the attendance at school or schools is derived. . . .

"That a system of generalized nursing is the ideal in the field of public health is the opinion of those who have made a comparison of both specialized and generalized systems and who are qualified to make a pronouncement. . . .

"It cannot but appear self-evident to anyone who has made a study of our health administration as its outlook has expanded and its development has progressed by leaps and bounds during recent years, that we are not dealing here with merely an educational reform or a social problem, but with a world wide realization of the importance of preventive medicine in the conservation of life and health. For this reason it would seem patent for the Health Officer to undertake whatever measures are reasonably available to promote the health of the entire community at all times and for those of any age. He cannot without laying himself open to the charge of inconsistency assume responsibility for the health of children up to 5 years of age, then turn them over to another official until they are 16, and subsequently without adequate records in his possession concerning the events in their physical and mental career at school, be expected to take the necessary steps to insure for them a healthy manhood and womanhood. . . ."

We all, whether health or school officials, doctors, nurses or lay persons, take a conscious pride in the great child hygiene movement, the impulse of which has travelled round the world and the influence of which has been felt to a greater or less degree in every city, town, and hamlet to which the gospel of hygiene and sanitation has penetrated. We all fully realize that as never before in history the present is the era of the child, and that medical inspection of schools, no matter by what authority carried on, has made an outstanding contribution to the betterment of the status of our children. In the future, as in the past, no matter what may be the decision of the city's representatives on the proposed amalgamation, our desire will be to cooperate to the best of our ability with School Boards or other agencies engaged in health and social work, to the end that we may forget our personal differences and consider only the child. Only by the assumption of such an attitude can our efforts be successful and the children be assured of a square deal.

So in closing this discussion I want to repeat that I am thoroughly convinced that the Health Department should be held responsible for the health supervision of the school child and the Board of Education be held responsible for his health education.

ETIOLOGY OF OCULAR DISEASE*

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The search for the cause of diseases of the eye is probably one of the most difficult points that the oculist has to contend with and in this phase of the subject, he is not sufficient or competent to handle the matter alone. There are certain diseases of the eye that are purely local in nature as well as local in origin and these are usually of less serious import than those diseases of the eye that are due to systemic disturbances. In general the etiology of ocular diseases may be classed as follows:

Infection:
- Local
- Metastatic

Toxemia:
- Metabolic
- Infectious
- Poisons

Trauma:
- Local
- General

Tumors

Degenerations

If we study this table, we will see that the oculist requires general help in the localization of metastatic infection, in the origin of all of the toxemias, in the management of general trauma, in the origin of tumors, and in the causation of ocular degenerations. That leaves but two types of ocular disease that the oculist should endeavor to treat without the aid of other medical advice, namely local infections and local trauma.

It is perfectly true that the ocular manifestations of systemic disease are best cared for by the oculist himself, but local treatment alone does not suffice. It is absolutely essential that the underlying cause, no matter what it may be, should be searched for and if possible eradicated. Here comes the role of the man in general practice and here is the necessity for the close co-operation between him and the oculist. It is not sufficient for the internist to report "heart and lungs normal, urine normal, blood pressure within normal range." Detailed study of the case is necessary in order that all possible factors that might contribute to the ocular disease might be uncovered and evaluated as to their significance. That can be done only by a systematic study of the case and to that end we have been using a so-called "Etiology Sheet" in our work at Michael Reese Hospital. The following sheet becomes an essential part of the hospital record of every case in which systemic study of the patient is required.

MICHAEL REESE HOSPITAL
Supplementary Record

ETIOLOGY SHEET Ophthalmological Dept.

Nose:
- Inspection
- X-Ray of sinuses
- Suction

*Read before the Joint Session at Illinois State Medical Society, Peoria, May 18, 1933.

Throat:
- Inspection
- Tonsils
- Bacterial content of secretion

Teeth:
- Inspection
- X-Ray of teeth

Ears:
- Inspection

Thyroid:
- Inspection
- Basal metabolic rate

Chest:
- Physical examination
- X-Ray of chest

Abdomen:
- Inspection
- Palpation

Genitals:
- Male: External inspection
  Prostate
  Bacterial content of secretion
- Female: External inspection
  Condition of cervix
  Bacterial content of secretion
  Ovarian abnormalities

Joints:
- Inspection

Blood Pressure:
- Time taken

Urine:
- Single specimen Alb. Sugar Casts Indican
- 24 Hour specimen Alb. Sugar Casts Indican

Blood:
- Time taken R.B.C. W.B.C. Hb.
  Polymorphs Large Monos. Lymphos
  Wasserman Eosinos Kahn
  Blood chemistry
  Indicanemia

Spinal:
- Wassermann Lange Gold Colloid

Mantoux:
- + or —

G. C. Comp. Fix.
- + or —

Obviously it is not necessary to carry out this complete examination in every case and consultation between oculist and internist will determine exactly how much should be undertaken. When this information is available then the two physicians can evaluate every pathological condition found and endeavor to estimate the importance of such conditions in the causation of the ocular disease. In the majority of cases more than one pathological factor will be present. Scientifically, the proper way to determine the etiological factors would be the elimination one by one of all pathological conditions present; but the patient is apt to die during the process. Consequently the treatment of such systemic diseases as may be found must be instituted coincidental with treatment of the local eye condition. Under such circumstances it is emphatically impossible to say specifically what was the cause of the ocular disease. For after all there are only two proofs—first the therapeutic test and second the anatomic proof.

The therapeutic test is notoriously unreliable. For example, an individual with an iritis may have, as in one of my cases, a 4+ Wassermann, a positive tubercular lesion, and apical abscesses of various teeth. One or all of these may be the cause and the fact that the iritis may disappear after the removal of the infected teeth is no proof that the iritis might not have had an underlying tuberculous or syphilitic basis. However, when only one possible cause for the ocular disease is found, when that cause is removed, and when the ocular disease disappears promptly thereafter, the probability is that the ocular condition was caused by the pathological entity that was removed. Note that I say probability, for only too often do we congratulate ourselves smugly that the uveitis is cured for life when it pops up again. I recall a very illustrative case of iritis in which diseased tonsils appeared to be the only possible cause and the removal of the tonsils was followed promptly by disappearance of the iritis. But within eight months, the iritis recurred in exactly the same form as in the first instance. So undoubtedly there was some other cause of the ocular disease, to which cause the diseased tonsils were only a secondary contributing factor; the straw that broke the camel's back, so to speak. I might add that the other cause was not ever discovered and that recurrences bobbed up every few years.

The anatomic proof can be positive only if the entire eyeball can be examined histologically, which the majority of patients with uveitis object to. Uveitis due to syphilis or tuberculosis can be recognized in the majority of cases by careful histological study. In the syphilitic uveitis, the presence of spirochaetes within the ocular tissue has not yet been proven unreservedly, although it is extremely probable that they are lodged in the inflamed tissues. The secondary type of ocular syphilis cannot always be differentiated histologically from similar ocular disease of other origin; but the tertiary or gummatous types can be recognized without difficulty. It is also perfectly true that

these latter forms present a clinical picture that can be recognized as such in the majority of cases by the experienced clinician. Ocular tuberculosis, however, is considerably more characteristic than is ocular syphilis, histologically speaking. Both the active and the chronic forms offer anatomic changes that allow of positive etiological diagnosis without difficulty. And in the past two years, the Koch organism has been recovered from the ocular tissues in pure culture. In two instances reported recently from Vienna, not only were tubercle bacilli grown in pure culture from the ocular tissues, but were also found in the same cases in massive culture from the circulating bloodstream by the Löwenstein method. Personally, I have never been successful in obtaining a culture of tubercle bacilli from the bloodstream in any case of ocular tuberculosis.

So with this preamble which tries to say that we should always search for the causative factor of ocular disease, but are not sure of spotting it accurately, allow me to quote some recent statistics to show the enormous divergence of opinion as to the etiology of uveitis. Gilbert in the Kurzes Handbuch der Ophthalmologie, Vol. V, reported upon the etiology of 500 cases of irido-cyclitis as follows:

Tuberculosis	45.6%
Syphilis	16.6%
Rheumatism	3.0%
Gonorrhoea	3.0%
Herpes	3.0%
Influenza	1.6%
Gout	1.0%
Unknown	17.4%
Other Causes	8.8%
Total	100.0%

At the 1932 meeting of the Czecho-Slovakian Ophthalmological Society, F. Hulla reported upon the cause in 222 cases of irido-cyclitis that had been seen in the Czechish University in Prag as follows:

Tuberculosis	21.8%
Syphilis	8.8%
Rheumatism	2.7%
Gonorrhoea	1.1%
Herpes	0.2%
Dental	1.3%
Nephritis	1.3%
Sinus Disease	1.1%
Unknown	8.2%
Other Causes	53.5%
Total	100.0%

At the same meeting, Kahoun reported upon the cause of 233 cases of irido-cyclitis that had been examined in another part of the country, as follows:

Kahoun—233 Cases

Tuberculosis	25.5%
Syphilis	3.7%
Rheumatism	9.7%
Hypertension	1.6%
Diabetes	1.5%
Sinusitis	0.5%
Nephritis	0.7%
Gout	0.2%
Unknown	8.2%
Other Causes	53.5%
Total	100.0%

For the sake of comparison, I compiled the findings on my last 50 cases of uveitis and found the following figures:

Gradle—50 Cases

Sinusitis	4%
Dental Sepsis	16%
Syphilis	16%
Tuberculosis	38%
Purpura	2%
Leukemia	2%
Prostatitis	2%
Undetermined	20%
Total	100%

Please do not for one minute think that I consider the figures of my small series as characteristic except in one respect, namely, the preponderance of tuberculosis. In order to arrive at percentages of real value, the series must number at least one thousand cases or more. But I do wish to point out that tuberculosis plays a greater role in the production of ocular disease than is generally recognized, at least in this country, and that it behooves us to attack the problem of ocular tuberculosis more promptly and more thoroughly than we have been in the habit of doing in the past.

Why these specificities when speaking before an audience of general men? Because it is the general practitioner rather than the oculist who can find the cause of ocular disease, provided he knows what to look for, and it is the general man who can prevent the occurrence and recurrence of ocular disease. But the general practitioner cannot be satisfied with an "insurance" examination of the patient afflicted with ocular disease, but must search out all possible sources, resourcefully and painstakingly. It is perfectly true that in only too high

a percentage of cases will the search be unavailing, but nevertheless it must be made, not only for the sake of the individual patient, but even more for the sake of increasing our knowledge for future prevention and cure of ocular disease.

THE CARE OF THE INDIGENT*

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The care of the indigent is a responsibility of government, federal, state or local, dependent to a large degree, upon the percentage of indigent cases existing in a given community and the ability of that community to meet that responsibility. If the local community is able to meet that responsibility without an undue burden on its people, it should. If that indigency is the result of some uncontrollable disaster, such as tornado, fire or flood, then, of course, the local community has the right to look for, and receive, outside aid from various sources.

The care given to indigents should be that care which is essential to normal life as regards such necessities as shelter, food and clothing and medical care which modern civilization demands. To dissect this responsibility and thrust a portion of it on any one branch of our economic or social organization is unfair. Medical care, as a social and economic necessity, is not unlike the essentials of shelter, food, clothing, etc., and as I have repeatedly said before, the problem of medical economics is not an isolated economic problem but a part of the whole economic problem that confronts any given community.

The question is frequently asked, "Who is to blame for indigency and who is responsible for indigency?" This is important. I cannot answer who is to blame but I can answer who is responsible for their care. We had better study the causes of indigency to determine who is to blame. The causes are:

1. Unemployment.
2. Sickness, including mentally and physically handicapped individuals.
3. Low wage scale.
4. A group of miscellaneous causes that are not extremely important where a large number of indigent cases are concerned.

Indigency reaches its highest point in periods of economic depression when it can be less well cared for, and it reaches its extreme low ebb in periods of unusual prosperity when it is rather easily cared for. In periods of economic depression, unemployment and low wage scale form the great majority of causes for indigency; however, even in times of prosperity there is unemployment and low wage scale indigency; while in periods of prosperity these two groups fall and during that period sickness and the individuals who are physically and mentally handicapped form the largest percentage of indigent people. The miscellaneous group is not important. It may include malingerers, poor investments and reckless spending in estates inherited.

It is, I believe, obvious from the foregoing that indigency is largely a problem of economic conditions in industry, and certainly the medical profession has little to do or say in the control of such matters. What are our present plans for care of the indigent? They might be classified under two distinct headings because it appears that there are two definite classifications:

1. General care.
2. Medical care.

First, general care. In the present emergency we are all quite familiar with the various sources of revenue by which the indigents are being cared for aside from medical care. These come from personal and organized charities and municipal, county, state and federal aid under some form of taxation directed to meet this responsibility, each giving what he can, the remainder by taxation. Medical care is through similar agencies, private, charitable, municipal and state hospitals having associated outpatient departments for care of ambulatory cases; also clinics and dispensaries associated with the medical schools; and then again in the rural communities through a physician employed by the county or township board. In a very large percentage of these institutions where medical care for the indigent is instituted the services of everyone connected with such care are paid for by one of the organizations or sources enumerated above but in very few of those instances are the physicians paid at all for the vast amount of work they do in the care of the indigent. I do not think I would be far

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out of the way by saying that ninety per cent. of the medical care of indigents in the United States at the present time is being given by the medical profession free. In a communication recently mailed to the Secretary of the State Medical Society of every state in the Union and by further correspondence with nearly fifty other people who are familiar with this work it is clearly demonstrated that in the vast majority of indigent work the physician is not paid. In fact, in ninety per cent. of the correspondence received it was stated that physician's services were free. It is generally assumed, for some reason or other, perhaps through customs of years gone by, that it is his duty to render his services to indigents free of charge.

In those institutions, particularly large municipal and charity hospitals and county hospitals where these patients are used, to a large degree, for teaching purposes there is, of course, some direct benefit accruing to the medical profession through its department of education. And the men doing the work free of charge and using this material for teaching purposes probably feel somewhat repaid for the time and effort spent. However, this is not a compensation and in these cases, the patient usually receives the very best medical and surgical care procurable in the community.

In the rural districts where a county physician is hired to take care of indigent cases it becomes a very important problem from the standpoint of the public. In a large number of instances throughout the United States the work goes to the lowest bidder or perhaps one who has some political "pull." It is quite obvious that the medical service purchased upon this basis is apt to be an inferior service and the public, therefore, pays the penalty for poor medical service as a result. There is another vital feature associated with this particular type of work in that it takes away from the public the privilege of having their own physician and places them under the care of an individual who necessarily cannot be qualified in all the branches of medicine and surgery. It is true that there are many exceptions to this program but in the great majority of indigencies either the family physician has to do the work gratis, the patient has to do without it or they have to accept the appointee of the township or the county board.

This is obviously a serious problem and one for which the medical profession should not be criticized because of their interest in it because, after all, it affects many more people than it does physicians. If we are to estimate at the present time the number of indigent people in the United States it would probably approximate mostly sixty million people who come under the classification of some degree of indigency. We must remember that indigency occurs in varying degrees especially in those people who have some form of employment but not sufficient income from which to derive a living. So that I believe I am not far wrong in estimating that sixty million of our population at the present time are suffering from some marked degree of indigency.

It seems obvious that the public as a whole should not ask more of the medical profession than they are willing to ask of themselves. The members of the medical profession besides giving their time give equally well of their money. In my own personal acquaintance among physicians who are not bordering on indigency themselves I do not know of a single instance in which they have not contributed to the care of the indigents in the form of cash during the present emergency. And furthermore, I do not know among my associates a single doctor who has refused to render service to patients because they were not able to pay for the same. Quite the contrary, I know a number who have volunteered to take care of them during their period of indigency, one might say, with the thought in mind of keeping their business intact for better days to come. But this is certainly not the reason in the majority of indigents.

Now the solution of the problem of the medical care of indigents lies in an understanding between the medical profession, represented in their local societies, the public at large and the public officials who have under their jurisdiction the dispensation of public funds and public care. With the intelligence of the general public in regards to this matter I think there would be little question. It has been proven that there is considerable question relative to the willingness of the county and township board to cooperate with the medical profession

in this serious problem. This is usually because neither the trustees nor the local society are familiar with the subject and how it is handled in other communities. However, there have been worked out in some states, notably Iowa and Indiana, perfectly satisfactory plans for care of the indigent. Satisfactory to the patient and satisfactory to the medical profession and to the public. They are satisfactory because they allow the patient choice of physician; to the physician because sickness is under their control and they are compensated; and to the public because they are discharging a responsibility as good citizens should. In a number of these plans a township or county board pays a flat sum for the care of the indigent in a given territory for a period of one year. The patient calls his family physician who renders the necessary service and then sends his bill to the County Medical Society who in turn pay him. In some instances the County Medical Society does not distribute the funds to its members but uses it for paying local and state dues, defraying expenses of their scientific meetings and maintaining a library. In other instances the indigent patient calls his doctor who renders service and mails his bill first to the County Medical Society who O.K. or alter it and send it to the county board for payment. In other instances the doctor renders his service, takes a note from the indigent and turns the note over to the board for cash. There are various other plans in operation. Time forbids entering into the details in particular; however, these plans are available for those interested in a study of the problems and a plan for their solution.

Unfortunately, in the large percentage of cases, no plan is in operation at all or it is only the single plan of having a physician who attempts to do all the work. This, of course, is a grave error because it denies the patient choice of physician, usually means inferior service and is discriminatory in character.

The above plans outlined are practically the only solution offered or available for the care of the indigent sick during long and severe economic depressions and it would seem feasible that governmental agencies might consider the necessity of creating reserves in periods of prosperity to draw on in cases of economic emergency. It also appears feasible that industry should create a reserve during their periods of high income to be drawn on during periods of unemployment or that some form of unemployment insurance be instituted. Industry has not assumed its obligation in this respect but has pursued a course of stock dividends, increased cash dividends thereby creating a speculative market which caught its own employees in the market decline and further increased indigency as a whole. Industry is cognizant of this fact and perhaps better plans will be established for the future.

As regards the normal indigency of good times, caused as a result of low income to a large percentage of our industrial population, which places them in the partial indigency class where they cannot procure proper medical and hospital care, group hospitalization plans offer a solution for the situation. Time forbids a detailed discussion of this plan. Suffice it to say that actuarial statistics are available and tested that make it possible to give hospitalization care for a period of twenty-one days per year for twelve dollars per year where large groups are considered, and to create a reserve for unusual emergencies.

These plans are available for study for those who are interested. All of these plans do and must keep medical care under the control of local medical societies, give the patient choice of physician, and render efficient medical care.

I think it proper that a committee be appointed by the Illinois State Medical Society to make a study of plans now in operation and that one be adopted that, by minor alterations, will meet the requirements of various communities and local medical societies. I also think it imperative, that inasmuch as the peak of indigency occurs in economic depressions and has to be met by adding an increasing burden to the still solvent public in the form of donations and taxes, that the profession should and must guard against unscrupulous members running up excessive and unwarranted charges and against rendering service, especially surgical, when they can be postponed without harm to the patient. Unfortunately, such instances have happened and they defeat the whole purpose of both the profession and the public of attempting to handle indigency sickness with fairness to all concerned.

DISCUSSION

Dr. F. E. Bollaert, East Moline: I have been greatly interested in this problem and have been working at it. I want to thank the speaker for his concise and clear views on this subject. We in Rock Island County have been working quite a lot on the care of the indigent, particularly the factory cases that have been out of work and now cannot pay their doctors. In our county a good deal goes by bidding. In the last year one of the men of our County offered to take one of these bids at one dollar per year. At the same time he was applying for membership in the County Society. He was not accepted to membership. Now he has agreed to drop the dollar a year work and has been reinstated. It is not a question that interests all of you, but there are certainly members here from counties in which there are public institutions and insane asylums. In the last year, in the State Department of Public Welfare, they have decided that it would be a good plan to have surgeons and consultants come in from outside and donate their services to these public institutions. As a result they have discharged their State surgeon, a man who was getting a fairly decent salary for going around to these institutions and doing surgery. They found plenty of men in most of these counties who were willing to come in and do the surgical work for the state free of charge. We did not think this was charity. Everyone else doing work for the state was being paid. Why not the surgeons and consultants? If I may suggest, carry back this message to your county societies, especially in the counties where there are public institutions. There will be a motion introduced into the House of Delegates concerning such practice, except where it is connected with teaching institutions. This happens not to be the case in most of these institutions.

Dr. Elizabeth R. Miner, Macomb: I thank Dr. Packard very much for his fine paper. I would like to ask what kind of psychology we can use to change the attitude of the public so that the doctor may be paid. Just now it seems to me everyone is asking the doctor to do everything for nothing. We know doctors are perfectly willing to do their share of charity, but why not ask a fair price for their services. I notice when anyone else puts in a bill to the county supervisor they ask a little more than the ordinary price. When doctors put in a bill the county supervisor expects them to make it so low that it is unfair. The ordinary price for obstetrical care in our county is $25.00; for the county it is $10.00 and if the county supervisor is willing this bill goes through. If we have not received his consent to care for the woman beforehand, it may not go through. The doctor is expected to give money toward charity and do charitable work besides. Why should he not be paid for his work?

Dr. D. D. Monroe, Edwardsville: Under the present law designating township relief as the basic element for caring for the indigent we have tried out in our county a plan of township physician. The city of Alton comprises a township and city all within the same limits. During the year our physicians in Alton rendered $24,000 worth of service and then because the township refused to pay its doctors, and the city refused to pay, the local medical society discontinued its service. Afterwards one physician in the city of Alton made a bid of $800.00 and took over the same work. No man who bids on that sort of basis is ever adequately paid and does not render service that $24,000 calls for.

Dr. R. B. Armitage, Lawrenceville: Several years ago our County Society decided they could handle this problem much better than the individual, so we made a contract price for the entire county work. All the orders for medical aid come through the supervisors in various towns. Our bills are sent in to the auditing committee of the County Society and we are paid. In the four or five years we have run from 61 to 105 per cent. of what our bills amount to. The last two years we changed our plan because the supervisors in the county decided they would change our fee. We found out that a strong society even in a small county can accomplish a good deal. The Society refused to have its fees changed the way the supervisor wanted. We got together and decided on a new fee schedule for pauper work. Now we are paid for everything we do by the supervisor. The town supervisor said they could not do anything because we seemed to be organized and all the doctors stuck to same fee schedule. The only way to work this is by a strongly organized society.

MILITARY HYGIENE*

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Military Hygiene and Sanitation and Preventive Medicine have the specific aims of maintaining the health and vigor of selected men living together in large groups and of so training their minds and bodies that fatigue and exposure may be endured with a minimum of disability. In order to achieve all that may be accomplished in the direction of this ideal every well established practical measure for the preservation of health and the prevention of disease is utilized to the extent permitted by the military exigency.

There are certain essential differences between military and civil public health practices. The army surgeon deals largely with picked men the majority between the ages of 20 and 30. At any time he must be prepared for the abrupt transportation of the community from a station complete with modern sanitary installations to a remote locality where environmental conditions are primitive. The state or city health officer deals with a population of all ages, and with all degrees of

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susceptibility to infection, but a population which is stable and where the incidence of disease may be predicted with fair accuracy.

Measles and chicken-pox and mumps cause the civilian health officer, at most, to speculate on whether the curve will go up or down next week. To the army surgeon, especially if his organization contains a large proportion of unseasoned recruits, these diseases are more to be feared than others whose death rate is far higher but which do not tend to spread so rapidly, and cause the disability rate to mount so suddenly. A sick man is not only a total loss, from a military standpoint, during the period of his hospitalization; he requires the time of other persons to nurse him and to treat his ailment. The prevention of disease by every known practical means is therefore imperative.

During the past few years miracles have been accomplished in the prevention of disease. Through modern water purification and sewage disposal systems, the pasteurization of milk, fly control and the identification of carriers, typhoid fever is no longer an urban but a rural problem. With a resultant sense of security the city dweller is not having himself immunized against typhoid fever, and he does not concern himself with revaccination against smallpox.

It is my impression that the average health officer does not wage a hard fight to change these conditions. His interest centers upon the protection of his population from the carrying agencies of communicable disease.

That his community shall be a safe place in which to live is his chief aim. He can accomplish this with money, and, to obtain the money he needs the support of only the small group of individuals who make appropriations. It is so impossible to secure the interest and cooperation of an effective proportion of the population he is constantly tempted away from all effort to secure individual prophylaxis.

The situation of the Army surgeon is absolutely different. His location depends upon the military necessity and his control of disease vectors in that location may be ended at any moment. Therefore individual prophylaxis is of the greatest importance to him, and every person under his care without exception is periodically immunized to smallpox and typhoid fever. The army as a whole is so well satisfied with the results of individual prophylaxis that a large percentage of army children are immunized against diphtheria and scarlet fever even though acceptance of these procedures is entirely voluntary.

Another difference is that the activities and functions of the Army Sanitarian are definitely and specifically prescribed. His reference and text-book is Army Regulations. In the official classification those regulations which refer to the Medical Department have the generic number 40, the specific number follows a dash. For instance, the regulations which concern the general provisions of the medical department are numbered 40-5, those which concern Standards of Physical Examination are 40-105. The object of the latter is stated as "being to procure personnel which is physically fit for the rigors of military service."

It is with men selected in accordance with this standard that the Army doctor deals and it is his aim to keep such fitness at the highest possible level. His first concern in this is AR 40-205 which is "Military Hygiene and Sanitation." This pamphlet of only 20 pages is an epitome of knowledge and experience in practical sanitation. It *is* Military Hygiene and a brief analysis of it would seem to be required in such a paper as this.

The first paragraph requires cooperation and ends with this sentence: "The issuance of proper orders and regulations regarding hygiene and sanitation will not produce satisfactory results unless they are intelligently enforced and implicitly obeyed by all, from the highest to the lowest grades." Paragraph 2 fixes definitely the responsibility in these words: "Commanding officers . . . . . are responsible for sanitation and for the enforcement of the provisions of sanitary regulations." "The Medical Department is charged with the duty of investigating the sanitary condition of the Army and making recommendations in relation thereto, of advising with reference to the location of camps and stations, the quality of water supply and purification, the efficiency of waste disposal, the prevention of disease among military personnel, and the execution of all measures for conferring immunity from disease on military personnel." Paragraph 3 says, with regard to the importance of sanitary supervision: "Supervision of the hygiene and sanitation of a station or command is one of the most important duties devolving upon a medical officer." Paragraph 4 concerns instruction in hygiene and sanitation; 5 and 6, sanitation details and sanitation in a theater of operations. Paragraph 7 says, with regard to personal cleanliness:

"At prescribed physical inspections of enlisted men particular attention will be given to the personal cleanliness of those being inspected." Paragraph 8 deals with the important matter of shoes and the care of the feet: "Company commanders, by frequent inspections, will see that the feet of their men are kept in normal condition for marching." "An undue amount of foot injury and disability from shoes will be regarded as evidence of inefficiency on the part of the responsible officers and will be investigated." Paragraph 9 contains the requirement that:

"Each barber will be required to undergo a monthly physical inspection and submit to such other examinations and tests as may be necessary to insure his freedom from communicable disease. Barbers will keep their persons and clothing clean, and while attending patrons will wear a clean, washable outer coat or uniform. They will wash their hands thoroughly with soap and water before attending each patron. Barbers will not sell or give away, without the approval of the surgeon, in writing, medicinal applications for the hair or skin to be used outside the barber shop, nor will they attempt, under any circumstances, to treat pimples, moles, warts or similar lesions of the skin or scalp. The application of styptic pencils or other solid styptics to arrest bleeding from cuts, etc., is prohibited."

The sanitary suitability of a water supply, the importance of purification, methods for purification, and laboratory control are covered in Paragraph 10. Also are given methods for the purification of water in the field—by chlorination in the Lyster bag or other receptacle or by boiling.

While working at the Army Medical School in Washington, on the subject of water purification I learned that one drop of 7% tincture of iodin is sufficient to render a canteen full of water practically sterile and quite safe for drinking.

One of the most important subjects is that dealt with in paragraph 11.—Foods and drinks. The manner in which it is prescribed that bread and meat shall be handled is as follows:

"Vehicles for transporting bread, fresh meat, and like exposed food supplies will be kept scrupulously clean. Each organization or mess will be required to provide clean paulins, cloths, bags, or other approved devices which will fully protect such supplies from contamination from handling, exposure, and contact with any part of the vehicle."

The same paragraph, under mess management, requires that: "Officers and others in charge of messes will make a thorough study of the purposes served in nutrition by the different foodstuffs (protein, fats, carbohydrates, mineral salts, and vitamines). This knowledge is necessary in order that the meals prepared for consumption may contain a proper proportion of each of these nutrients."

It is too bad when a fine old tradition must be upset but the following is actually a regulation: "Hash will not be served as food unless freshly prepared."

Paragraph 12 requires that all food handlers shall be carefully examined for evidence of communicable disease. "Scrupulous cleanliness" is demanded, by par. 13, "in all rooms used for the cooking and serving of food."

The high incidence of the so-called "Sputum borne diseases during the training camp period of the world war caused the methods of washing dishes, and especially mess kits, to be thoroughly investigated.

The following is quoted from par. 14, "c. Mess kits. —When the cleansing of mess kits by each individual soldier is necessary, three suitable containers, such as galvanized-iron cans or tin boilers, will be provided. The first two receptacles will contain hot and soapy water and the third will contain clear hot water alone. Each soldier will clean his mess kit by scraping with his spoon the residual food into a garbage can or other suitable receptacle, then carefully washing the equipment in the first receptacle of soapy water, rinsing it in the second receptacle of soapy water, and finally thoroughly rinsing it in the receptacle containing clear hot water. After the final rinsing, the equipment will be shaken and air dried. Drying towels will not be used. Personnel in charge of mess will be held responsible for the proper changing of water in receptacles to insure mess kits being washed in hot water either clear or soapy as the case may be.

"d. In the presence of an epidemic of intestinal or respiratory diseases the boiling or steaming of dishes may be required."

Garbage is the subject of par. 15, excreta of par. 16 and manure of par. 17. The adequate disposal of human waste is one of the most difficult matters the medical officer has to deal with among persons not accustomed to the requirements of military hygiene. Army regulations cover the subject clearly and adequately. Paragraph 18 concerns the pollution of streams and the analysis of sewage.

The housing of troops is a military matter which receives most careful attention. Par. 19 prescribes:

"In barrack dormitories (squad rooms) at least 60 square feet of floor space and 720 cubic feet of air space will be provided for each occupant. In the determination of air space any height of the room over 12 feet will not be considered. Based on these allowances, the man capacity of each dormitory will be stenciled upon the doors as follows: "Authorized capacity,—men."

The remaining paragraphs 20, 21, 22, and 23 of 40-205 give in considerable detail information concerning mosquitoes, flies, lice, and bed bugs, and methods for their control or eradication.

Other regulations, pertinent to our subject, give in clear language the most modern practical methods for the prevention of communicable disease. They are as follows:

AR 40-210- The prevention of the communicable diseases of man. — General.

AR 40-215- The prevention of the communicable diseases of man. — Immunization.

AR 40-220- The prevention of the communicable diseases of man — Diseases of the respiratory system and other diseases transmitted by discharges from the respiratory tract.

AR 40-225- The prevention of the communicable diseases of man — Intestinal diseases.

AR 40-230- The prevention of the communicable diseases of man — Insect borne diseases.

AR 40-235- The prevention of the communicable diseases of man — Venereal diseases.

AR 40-240- The prevention of the communicable diseases of man — Miscellaneous diseases.

This group, from number 210 to number 240 are the preventive medicine regulations. They tell army surgeons what must be done and they inform other members of the military establishment what cooperation must be given the medical department to prevent communicable disease. No method of doubtful or debatable value is included and nothing of proved and practical value is omitted. As often as necessary to keep the regulations abreast with advances in medical and sanitary science amendments or "changes" as they are called officially, are issued.

Many laudable aspects of the sanitary regulations might be noted and discussed. In this I refer chiefly to AR 40-205. They are definite, clear, and concise in every detail; they are comprehensive in that they prescribe the right way for doing everything essential to health in any type of environment; they are progressive in that they enjoin upon medical officers a spirit of research toward improvements in methods and equipment; they are economical for the Army by the very nature of its mission in the field can have only bare necessities; there is nothing superfluous, any unauthorized reduction in or neglect of their requirements invites disease and disaster. All these qualities are summarized in a single word when we say they are "practical." The accuracy of this claim is constantly demonstrated. The question might now be asked, if practice of the principles of military hygiene actually does make it possible to live more safely in any type of environment why is the knowledge of these principles so exclusively military? Why, indeed?

Somebody might reply that hygiene is taught in the public schools and such teaching should be adequate. I agree that it should be adequate but it is not. The great and increasing group of instructors interested in health education in the schools is doing marvelous work and their influence is spreading. There is however in the modern educational system a current of opinion which is tending to undermine all their work, that is the theory that discipline is unnecessary. Mother church knows that Heaven can be attained only by absolute conformity with the sacred teachings. An earthly paradise requires nothing less. Mother church knows that the instruction must start while the child is still in the cradle. Instruction in personal hygiene should start no later and it must be no less continuous. I have no faith in the re-education of an adult to the extent of changing his habits. If he changes them he does so only under strict compulsion.

This is the reason there is a serious and unremitting effort toward effective personal and environmental hygiene in a military establishment. The army must.

My feelings in this direction have doubtless been strengthened by contact during the past few years with the fine young men who have come to Fort Sheridan as members of the C.M.T.C. During the first week of their separation from modern plumbing life is considerable of a burden to them. They have been taught hygiene from a book and they know as much about it as they could learn of golf or tennis from a book.

If it were necessary to prove that "military hygiene," with all that both words connote, is an asset we might point to the prevention of typhoid fever during the World War; to the discovery of the cause of yellow fever by Walter Reed, an Army surgeon; to the work of Gorgas in military hygiene which made possible the building of the Panama Canal. It is difficult for us to realize now that prior to 1898 our country spent every year on quarantine enforcement against yellow fever a sum of money equal to the entire cost to us of the Spanish American War.

I believe in the methods and teachings and practices of Military Hygiene. I believe that our country will benefit when such practical discipline is a fundamental in our public schools from the lowest to the highest grades. Call it by any name it is merely practical Public Health.

DISCUSSION

Col. J. J. McKinley, Illinois National Guard, Hines: The paper, of course, covered the subject thoroughly. It did not hit any of the details because it could not; it would take a book to do that. For me to raise any question about the paper or the methods, of course, would be foolish because, as the major said, we don't raise questions about the sanitary orders in the army. They are time-tried and fire-tested and you can't go wrong on account of them.

Now, to go to the particular problem in the National Guard, we have a body of men that are not picked over the way they are in the regular establishment. We haven't reached that standard at the present time. We are improving, though. Our men are not trained like the regular army men. We can only hope to have them trained basically so that, if things break, they will be able to get out and have a good start, at least.

When we go into camp, we have contractors that furnish our food. We have to educate these fellows because they change from year to year, and one that has been delivering last year for two weeks has forgotten a lot of things we taught him and we have to re-educate him.

We have a flare-up of intestinal trouble once in a while. That is only rare at the present time. However, three years ago we had a little flare-up, in one organization, and I took the medical inspector, the regular army instructor and myself and went over that thing from stem to stern and we could find nothing to lay our fingers on as to why that particular organization should have this little flare-up in intestinal trouble when none of the rest of the camp had. They were the flyers. The only thing we could lay our hands on was exposure in the air and getting chilled. That didn't satisfy me, but that is the nearest we could come to putting our fingers on it. Last year we had about decided to leave our garbage cans open because that attracted the flies and we thought it a good thing to attract them and keep them away from the kitchen. Now my friend here, the major, comes along and tells me that the thing to do is to put a trap on top of the garbage can. I have already ordered some of those traps for this year and trying it in our camps, and it lookes good to me, because no matter how careful you are the untrained man will not keep his fly bait moist. You can go around every five minutes of the day and find the same thing.

The care of the feet is another thing we had a lot of trouble to start with, but that has tamed down. We had an over-night bivouac two years ago, and we had kept after the company commanders to keep after the men about their feet, and have them put on woolen socks for the march. It was only eight miles. We were surprised that very few men came into the hospital to have their feet taken care of; in fact, I think only three. One of them came in, and he was the most sheepish individual you ever saw to walk into the hospital. We got him to take his shoes off and he had on nice thin sheer silk socks. I asked him what the reason was. He said he was on guard that night and didn't have time to change in the morning. I supposed he must have been some bookkeeper or some one who sat at a desk all day. I asked him what his civil occupation was. His feet were nice and sore. They weren't flat. There were no blisters but just feet that were actually tired out. He wouldn't tell me. I kept after him though. Finally he said he was a mail carrier, the last thing in the world you would think of.

Our water in camp is tested the same as our city water is tested several times. The mains are all flushed and then we put the mains through the process of chlorinating. We take samples from the ends of the mains every day and right in our own laboratory we run them through and, if we see that there is anything suspicious, we increase the chlorine at the pumps. We have our own pumps. I tried to get the testing material for sufficiency of chlorination this year and was informed that the army doesn't issue it any more. I don't know why. I thought it was a rather effective way of testing.

Maj. Hitchens: It's too expensive.

Col. McKinley: I will have to admit that I have no regrets about the ready made hash being done away with, but I would be indeed sorry if they did away with the freshly made hash itself. It is rather odd to see the class of individual, whether he is from the Gold Coast or whether he is from "back of the yards," come down there and will eat, if you allow them, with a mess kit that they would never think of going into a restaurant or any place where there was one-thousandth of the debris on the dish that is on that mess kit. You have to keep them constantly in hand. Of course, we only have two weeks at it, where you have fifty-two.

We notice that the only time they have any particular amount of respiratory diseases is when there is damp wet weather. They are not used to it, having to live in tents. Or, when there is very dry dusty weather. When either one of these comes along, we know that in a couple of days we will fill our hospital with these little attacks of lung trouble.

I do certainly agree with the major that you can not reëducate the adult in changing habits, to any great extent. However, the converse of that is not quite as near the truth. The man that has had good habits, if he is in a group that has poor habits, is very apt to slip.

If any great per cent. of the population of this country would live up to the sanitary rules the way the major has outlined them, and the way they are outlined in the 40 series in the army, we as a medical profession would be hit infinitely harder than State medicine ever has or ever will hit us.

Lt. Col. A. B. Middleton, Med-Res., Pontiac: I can understand the modesty of the Major, when he says we should not censure a man for being enthusiastic on some one point, because that is the thing he has been doing for years, a large part of the time in the Philippines with an enthusiasm against the house fly. The result of his work and that of his associates has saved thousands of lives. If he and others had not been enthusiastic in chasing the fly, thousands of natives now living would be dead today as well as hundreds of our soldiers. Standing as I do before Col. Pollard and Col.

Gillespie and Lt. Nelson, one of the sanitary officers in 119 of the general hospital, it makes me feel a little delicate in discussing this paper, even though my hair is gray.

I do want one thing to be remembered, if nothing else in my discussion is, and that is the Major's reference to fresh hash. If you know the real danger of hash that has been kept on ice before being cooked and if you are in a position of controlling the feeding of men, with this knowledge of the danger of stale hash, you will save many lives and much sickness. Do you know that if meat and potatoes are prepared, cut up, put together and stored in an ice box and kept there twenty-four hours and then made into a stew and served to human beings a large per cent. of those eating it will develop abdominal cramps and a diarrhea which often is fatal, due to the chemical change which takes place when meat and potatoes are mixed and placed in an ice box. It is the result of that very action which prompts the Medical Department of the United States Army today to establish the rule that, if you feed men poison like this when you know that will develop this condition, someone must suffer the consequences. The United States Army does not object to fresh hash. In fact, they approve of it, as it is one of the best foods I know. For example, a personal experience during the World War; while serving in the second training camp at Fort Ben Harrison. My outfit went out for a practice over night in bivouac. Our mess sergeant was a very good cook but at this early date knew nothing about military hygiene; he knew nothing about hash that had been let stand in the ice box before being cooked. All he knew was to make good meals. Therefore, he wanted to serve a nice warm meal the next day at noon. He had his men peel potatoes and cut up the meat, put it in the ice box over night. The next day it rained all forenoon and he could serve only a noon lunch; consequently the hash was served for supper. Out of thirty-four men nearly all of them became sick while some had to return to camp in the ambulance. Therefore it is easy to understand why the Army will not serve stale hash.

With regard to strict military sanitation, if such is enforced in our communities, the same as it is in Army quarters and camps, we would require, as Col. McKinley has said, fewer doctors and even they would have less to do because it would wipe out of existence more than half of the medical practice, but that cannot be done. The civilians will not stand for strict hygienic laws. Medical men should understand the principles of military hygiene and carry them out in communities in order that the people might be benefited.

Col. McKinley said that following the suggestion of the Major he was having fly traps made to set on top of the National Guard garbage cans. The Major does not stop here. He even goes after flies that are underneath the platform which supports the cans. Last summer while on duty at Fort Sheridan I happened to be in the party Major Hitchens took around the camp to show how it should be managed from the standpoint of sanitation, especially in relation to garbage cans and flies. He showed us the garbage can covers, fancy screen doors and everything else. Then he said to a couple of soldiers, "Bring a rake and hoe." He removed the platform upon which the cans were resting and began gouging around and said, "See that larva down there? They are unhatched flies. Consequently, you cannot stop by covering the can, you must get down underneath these platforms or you will never control the fly menace." Therefore, Col. McKinley had better get busy below as well as above his garbage cans if he wants to carry out the Major's idea of fly extermination and sanitation. All flies carry disease and we must get rid of them, nor are they always bred in the manure piles; they are found everywhere that garbage and decaying food exist.

The Major has had a wonderful personal experience. The army and the people of the United States owe a great deal to him for the research work he has developed in fly sanitation.

PHYSICAL MEASURES IN HYPERTROPHIC RHINITIS*

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Resection of any part of the inferior turbinate bone is imperatively indicated only in rare instances of unusually severe pathologic changes. The same holds good, but to a lesser degree, for septal resection for the purpose of remedying impaired breathing. Authoritative opinion properly tends to suggest radical surgery only when absolutely indicated and insists on reliance on conservative measures to attain most objectives. Clinical experience shows that with the correction of dietetic errors and dysfunctions of metabolism, conservative local measures suffice to reduce the size of the hypertrophied inferior turbinate.

Among these measures cauterization by chemicals and by intense heat has been tried and found wanting. Chemical action is hard to control and brings about unnecessary destruction of normal tissue. Galvanocauterization is an improvement over chemical caustics, but its application brings about inflammatory reactions which only too often terminate in scar tissue formation. Care must be exercised to prevent serious damage to the mucous structures which will permanently interfere with their functions. Ballenger has aptly said that if cauterization of the inferior turbinate is performed to such a degree as to accomplish

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anything at all, it will also produce scar tissue, certainly an undesirable end result.

It is clear that cauterization should have only a limited place in rhinologic surgery, as indeed we now possess in our armamentarium means by which we can attain satisfactory therapeutic results without at the same time causing harm.

DIFFERENTIATION OF CHRONIC RHINITIS

It is essential that we should be agreed on the classification of chronic rhinitis as a basis for the rational use of the newer physical measures to be discussed. While some authors make no differentiation of the types of chronic rhinitis, there exists a difference in the underlying pathology which is of special interest to us. Thus, the inflammatory process in the so-called "turgescent" form is not only less intense but of an entirely different nature than that of hypertrophic rhinitis. Rhinoscopy often suffices to show the early engorgement, smoothness, and bogginess of the inferior turbinal as differentiated from the infiltration of the connective tissue and thickening of the blood vessels in true hypertrophic rhinitis. In other words, rhinoscopy alone often suffices to separate a simple hyperemia from an increase of tissue. When, as is often the case, a sharp line of separation cannot be drawn with certainty, we need only to apply epinephrine or cocaine to settle any doubt, for these drugs can shrink a hyperemic mucous membrane but have no reducing effect on an hypertrophy for self-evident reasons.

Beck's classification of rhinitis, which is rightly regarded as the most comprehensive, clinically as well as pathologically, includes, in addition to the above, the hyperplastic or allergic form, the atrophic inferior turbinate, and the neoplastic and rarer forms of inflammation, such as syphilis, tuberculosis, and rhinoscleroma.

For our special purpose, so far as hypertrophic rhinitis is concerned, none of the classifications can serve us for therapeutic guidance. For this particular purpose I submit the following grouping:

1. *Simple, chronic rhinitis,* yielding to removal of the underlying cause;

2. *Congestive rhinitis,* in which the structural changes manifest a venous hyperemia, favorably influenced by removal of the underlying cause, plus conservative local therapy;

3. *Hypertrophic rhinitis* of a *mild grade,* responding to removal of the underlying factors plus energetic constitutional and local therapy;

4. *Hypertrophic rhinitis* with *turbinal osseous overgrowth,* for which only surgical resection is effective.

PHYSICAL MEASURES IN HYPERTROPHIC RHINITIS

The development of physical therapy as an integral part of general medicine and surgery, has added to rhinologic therapy three procedures, namely, zinc ionization, medical diathermy, and electrosurgery, each of which is effective in certain types of rhinitis. As these measures are not as widely known as their efficacy merits, we shall present them in a somewhat detailed and critical manner.

Zinc Ionization consists of the application of zinc to tissue by an electrolytic process. Zinc ionization is indicated chiefly in the milder forms of chronic rhinitis with slight pathologic changes of the nasal mucosa, especially of the inferior turbinal. The technic is relatively simple. All that is required is a galvanic battery, equipped to control the intensity of the current, a zinc wire which should be connected with the positive pole of the battery, and a fairly large, flat, felt-covered metal electrode to be connected with the negative pole.

After cleaning the mucosa of crusts and secretions, long narrow strips of gauze, saturated with Friel's solution are firmly packed into the affected chamber. Friel's solution consists of zinc sulphate, 5 grams, glycerine 60 cc. and distilled water, 1000 cc. Just before use the solution is diluted with an equal quantity of warm distilled water.

The zinc wire is fixed in the wet pack, the moistened felt-covered electrode is attached to any desired part of the body, and a current of about 10 ma. is allowed to run for fifteen minutes, when the current is reduced to zero, stopped, and the packing is removed. During the treatment the patient experiences profuse salvation and a pronounced metallic taste which he accepts when cautioned that they indicate effectiveness of the treatment. One treatment may suffice, but sometimes several are needed. We have yet to see a case in which more than four were required.

Rhinoscopy performed immediately after the conclusion of the treatment reveals the mucosa to have undergone a mild, superficial coagula-

tion. For 24 to 48 hours the nose is stuffy, as in a common head cold, but this soon subsides and breathing becomes normal. Nasal discharge becomes lessened and the general symptoms gradually disappear. The length of intervals between treatments is to be determined in each instance by the course of the symptoms just outlined.

Medical Diathermy. For severer types of chronic rhinitis diathermization is preferable to zinc ionization because of its prompt and striking effects. The technic we have developed requires the use of a special metal active electrode, gutter shaped and insulated to within 2 centimeters of the distal (nasal) end. This electrode is placed in a holder at right angles to facilitate direct vision of the operator. An indifferent block tin electrode, about 5 x 8 inches is best attached to the interscapular space, or, if desired, the simpler method of placing a metal cylinder into the hands of the patient can be used to complete the circuit. A foot switch for the control of the current is practical, as it leaves the operator free to use his hands and renders assistance unnecessary.

The current should be maintained at an intensity short of destruction, 250 to 450 ma. having been found effective, the variation depending on the type of high frequency machine, extent of pathology of the inferior turbinate, and manner of application. The application itself should not exceed a few seconds, and two or three such applications can be made at one visit. This procedure is repeated after a week. Local analgesia of the turbinate will be necessary only in highly sensitive patients, when a 4 per cent solution of cocaine applied for five minutes will suffice. It is essential to establish firm contact between the active electrode and the turbine, as partial or incomplete contact will result in sparking with a destructive action. On the other hand contact with the rest of the nasal membrane is to be avoided.

There is no appreciable immediate reaction, but within a few hours the turbinate swells and breathing is rendered difficult. The patient may complain of symptoms resembling acute coryza. These symptoms are entirely absent in some, mild in others, and marked in a few who do not tolerate any nasal treatment. After the third day there remains only a slight watery discharge. By that time the turbinate is reduced in size, and remains so, or is still further reduced by subsequent treatments until nasal function is restored to as near normal as possible.

Medical diathermy, however, is not a cure-all for every type of nasal or sinus disease. While it greatly improves ventilation of the nose in the types of cases under consideration, it has also certain limitations which must be appreciated. The simple treatment just described does not incapacitate the patient. It goes without saying that factors that lead to success are not only familiarity with the handling of the high frequency machine and of the electrodes, but also careful avoidance of the risks incident to every nasal procedure.

Electrosurgery is indicated in the forms of hypertrophic rhinitis in which pathologic changes have progressed to an extent for which medical diathermy is inadequate to give relief. To appreciate the effectiveness and also the limitations of electrocoagulation we must first free ourselves from certain erroneous ideas about electrosurgery which appear to have become widespread.

A comparison with the galvanocautery will prove enlightening. In the use of the galvanocautery a wire is brought to red heat. The electric energy used affects the appliance and not the patient, so that the same effects would be attained with any appliance heated by any other energy, as in the Paquelin cautery, for example. As already alluded to, this form of destruction by actual cautery has serious after effects. In electrosurgery we make direct use of a current of peculiar characteristics which also produces heat sufficiently to coagulate or even divide tissues. The heat, however, is created *within* the tissues by their resistance to the current, which in turn is under complete control of the operator both as regards intensity and extent. In this way our most important principle of conservation of mucous membrane can be applied with almost mathematical precision.

The technic of electrosurgery is not difficult, provided one thoroughly understands the proper equipment and its use. This is even more important than in the application of medical diathermy. The technic aims at producing one or two mild electrocoagulation punctures of the turbinal, one at the presenting portion and one about halfway back. The coagulated

areas should not exceed one quarter of an inch in diameter. A sharp pointed electrode is inserted up to but not beyond the bony portion. The indifferent electrode—the same as described for medical diathermy—had best be fixed to the skin of the interscapular space.

Simple as all this sounds and is, there are certain errors often committed by novices with undesirable results. The needle electrode is often inserted too deeply or too strong a current is used. These errors result in destruction of too much tissue and in violent reactions mitigating against the routine employment of this type of electrosurgery as an office measure.

Excellent results are obtained, however, by *submucous* or *intramural electrocoagulation.* When first introduced, submucous cauterization of the inferior turbinate was accomplished by a blunt, tunneled probe carrying a bead of chromic acid. With improvement of the applicator it became possible to produce a scar on the inner wall of the mucous membrane, in contrast to the linear scar produced by the actual cautery on the outer surface of the membrane.

Beck, Hurd, Morrison and others have devised electrodes for intramural or submucous electrocoagulation, which should replace the manner of cauterization just referred to. Beck's electrode is made of a long Hagedorn needle, insulated to 2 millimeters at the tip. After surface anesthesia, the needle is inserted into the head of the turbinate in about the center and carried along the medial aspect to the posterior part, hugging the periostium. The needle is slowly withdrawn, the current acting all the while. The same procedure is then carried out along the inferior aspect of the turbinate. To carry out the technic suggested by Hurd, Morrison devised an insulated double needle electrode which is used similarly to the single needle electrode.

Several modifications of these original technics have been presented. One may first perform superficial coagulation at the point of puncture prior to insertion of the needles. By this introductory step bleeding from large spongy or degenerated turbinates is controlled and frequently avoided altogether.

There are definite limitations to submucous electrocoagulation. Good results cannot be anticipated in extreme, unyielding hypertrophies. Favorable effects depend altogether on selection of suitable cases and correct technical application of the method. The usual precautions when electrosurgery is employed must be borne in mind.

The chief advantages of submucous electrocoagulation of the inferior turbinate are: 1. it is simple; 2. it can be carried out in the office without incapacitating the patient; 3. local reaction is mild and without danger of synechia formation; 4. it is painless under topical anesthesia; 5. the mucous membrane is conserved; 6. the turbinate is permanently contracted in size within a brief period of time; 7. normal or near normal nasal ventilation is restored.

CONCLUSIONS

1. Physical measures in simple chronic and hypertrophic rhinitis have afforded more prompt and better results than the older forms of cauterization.

2. Hypertrophy of the nasal mucous membrane, and in particular that of the inferior turbinate, being the main pathologic consideration in hypertrophic rhinitis, treatment is directed toward the reduction in size of the turbinate to overcome symptoms of nasal stenosis.

3. Zinc ionization, medical diathermy, and intramural electrocoagulation are free from undesirable effects, and give favorable results in cases amenable to conservative therapy.

4. Because of the conservative nature and therapeutic efficacy of physical measures in hypertrophic rhinitis, they merit wider application in rhinologic practice.

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DISCUSSION

Dr. H. L. Ford, Champaign: I am very much interested in Dr. Hollender's paper; it is well prepared. I should like to ask Dr. Hollender how widely separated his two needles are for submucous diathermy. I have had two of these electrodes and the first was so thin that it bent when introduced into the tissue. The other is so firm that it is, I believe, a little too firm. It is made by Mueller; the first was a Hurd.

Dr. H. W. Bau, Chicago: I should like to ask Dr. Hollender whether in medical diathermy of the turbinates, he uses 250 to 400 ma. with the patient in circuit or on a dead short. I have been using Beck's method, and instead of using a large plate on the patient's back, I use my nasal speculum for the indifferent electrode. That way I am able to get coagulation with much less current than by using a large plate on the back of the patient.

Dr. R. H. Good, Chicago: I think Dr. Hollender should speak about the middle turbinate. Diseases

caused by the middle turbinate are sometimes much more serious than those of the inferior turbinate. I should like to know if he has used diathermy on the middle turbinate.

Dr. A. R. Hollender, Chicago (closing): With reference to electrodes for submucous electrocoagulation, the Hurd electrode was described in an article which appeared in the *Archives of Otolaryngology* some time ago. All manufacturers of diathermy equipment now make electrodes for turbinate reduction. Some of these electrodes are better than others, and it is mainly a question of preference based on the use of one particular type. The double needle electrode must be used cautiously. Some of these points are quite brittle. Also a short circuit may result in failure of coagulation. For these reasons, in my hands, the single needle electrode is more desirable. 250 to 400 ma. can be used with the patient in circuit. This will vary with the type of electrode. There is no objection to making the nasal speculum the indifferent electrode, the same as employing a tongue depressor for the indifferent electrode in tonsil coagulation.

I do not think I would use electrocoagulation on the middle turbinate unless there was some unusual indication present. We get some influence with the use of medical diathermy and zinc ionization and they are preferable because they are safer procedures. There have been some reports on the use of electrocoagulation and the galvanocautery for middle turbinate pathology, but in my opinion sufficient proof has not been established to guarantee the safety of these procedures high up in the nose.

THE VALUE OF COMBINED CHOLECYSTOGRAPHIC AND LIVER FUNCTION STUDIES*

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There is abundant evidence to support the great value of cholecystographic studies, (rendering the gall bladder visible to the x-ray by the injection or ingestion of certain dyes) as an aid in the diagnosis of pathologic conditions of the gall bladder. At present this is so generally acknowledged that it hardly seems necessary to dwell on the advantages of this roentgenologic procedure. It is well known that cholecystographic studies may be made by giving the necessary dye either orally or by intravenous injection. That both methods of dye administration have proven of great value there is no question, yet nearly all careful observers have been willing to concede that the intravenous method is at least somewhat more accurate, because a definite amount of dye is introduced directly into the blood stream in comparison to a somewhat uncertain amount absorbed when given orally.

Time will not permit a statement of all of the advantages and disadvantages of the two methods of administering the dye, but even if both methods were equally accurate from a roentgenologic view point, the intravenous method has another important advantage that cannot be disregarded. Before considering the matter further let us briefly refer to the therapeusis of gall bladder pathology and the subject of liver function.

Mortality in Gall Bladder Surgery. The successful therapy of a large percentage of chronic diseases of the gall bladder is surgical. To the casual observer, gall bladder surgery appears to be associated with a far greater operative mortality than the comparative simplicity of the procedure should warrant. Countless surgeons have been shocked to lose patients 24 to 48 hours after a simple cholecystectomy when no especial difficulty was encountered at the time of operation. What is the explanation of this phenomenon and what can we do to avert it?

In 1918, Graham of St. Louis showed that in every case of inflammation of the biliary tract there is more or less inflammation of the liver. This hepatitis seems to be chiefly a pericholangitis and there is a good deal of evidence to think that the inflammation reaches the liver from the gall bladder by way of the lymphatics around the biliary passages. Therefore, in every case of inflammation of the biliary tract we are confronted with a liver which is more or less damaged. This idea is an important one when we consider that the liver is a vital organ in the sense that we cannot live without it; in fact, one can say with some truth that life can go on for about a week without both kidneys, but only a few hours without a liver. Probably many deaths are caused, in some degree at least, by a damaged liver. By the same reasoning we might conclude that if we had methods as accurate, for the study of the function of the liver, as those which we now have for studying the function of the kidney, we could greatly lower the surgical mortality in all kinds of operations,

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by merely knowing more accurately what patients were dangerous to operate upon because of impaired liver function.

Graham and his co-workers have also shown that when phenoltetraiodophthalein (isoiodeikon), the dye that is to be preferred for intravenous cholecystography, is injected it also stains the blood serum and that this dye can be used to estimate the liver function by a colorimeter. An abnormal retention of the dye in the blood stream is present when the gall bladder is impaired (18 per cent or less of the dye in the blood stream one-half hour after the injection is begun, is considered normal). Nearly all unexpected deaths following cholecystectomy, in which the intravenous liver function test has previously been made, have shown the retention of very large amounts of isoiodeikon in the blood stream. The greatest retention appears to be present in various forms of acute cholangitis and hepatitis, and in some cases of acute cholecystitis. It has been fairly well demonstrated that patients suffering from hepatobiliary tract disease, and showing a high retention of the dye in the blood stream, are usually very poor operative risks in whom the outcome is often fatal. If the retention of the dye is more than thirty per cent all surgery should be postponed until the patient can be prepared more suitably. According to Graham[1]

"The preparation consists for the most part in putting the patient to bed for two or three weeks and giving a large amount of carbohydrate in order to be sure that the liver is well filled with glycogen. We were gratified to find that, by carrying out such a treatment, the liver function, at least as crudely estimated by means of the retention of the isoiodeikon, is greatly improved. At any rate our mortality figures, during the last three years, have been greatly decreased as the result of this simple means of estimation of the liver function. For example, in the three years prior to the use of this test of operability, our mortality in 216 cases of simple cholecystectomy was 6 per cent, and the last three years, since using the test, our mortality in 224 cases of cholecystectomy has been 0.4 of 1 per cent. In fact there has been only one death in this list during the last three years, and this single fatality was due to an out and out pneumonia with pulmonary edema. We have not declined to operate on dangerous cases, but have merely postponed the operation until we could get the patient into suitable condition as judged by the dye test."

Surely any method that will reduce the surgical mortality in gall bladder surgery to a near vanishing point should receive our most earnest consideration.

SUMMARY

It should be emphasized that the same dye that is used in the liver function test can also be used for a simultaneous gall bladder x-ray examination. This, in our opinion is one of the strongest arguments in favor of the intravenous method of cholecystography. When given a case where chronic disease of the gall bladder is strongly suspected, why not determine, not only the presence or absence of gall bladder pathology, but at the same time ascertain the operability of the patient?

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PERINEAL LACERATIONS

A Method of Conducting the Second Stage of Labor Which Will Lessen Their Occurrence

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The primary object of any method of conducting the second stage of labor is to preserve the perineum.

Edgar, in his "Practice of Obstetrics," states that "the most important part of the management of the second stage is the prevention of tears," and goes on to say that "lacerations of the fourchette in primipara and superficial tears about the vulval orifice often occur, but that these readily heal with ordinary asepsis." The correctness of the latter statement is self evident, and will be readily concurred in by the majority of obstetricians. The first statement and another to the effect that "*Deep tears are avoidable in normal cases*" will be a surprise to many and considered of no importance to the group who contend that a repaired episiotomy or spontaneous laceration leaves the perineum in the best possible condition. They ignore the fact that repair means scar tissue, and that scar tissue never functions as normal muscle.

The contention of this paper is based upon the experience that deep lacerations, by which is meant those involving muscle whether spontaneous or due to an episiotomy, are avoidable in the majority of normal cases. To avoid a laceration is imperative to quote Edgar again because, "It is scarcely an exaggeration to state that one half of the gynecological cases owe

their condition directly or indirectly to rupture of the muscles of the pelvic floor during labor."

There are three principal causes at work in the production of lacerations.

First. A presenting part, after compression and moulding, which is too large to pass through the vulval orifice after it has stretched to its limit.

Second. Too rapid expulsion of the infant so that tearing instead of stretching results.

Third. A faulty mechanism of labor whereby a larger circumference of the presenting part than necessary passes through the outlet.

In the first instance a laceration is inevitable, but, the number of cases in which this situation is a fact are in the minority and not normal. The majority of normal cases should be delivered without laceration.

In the second instance the principal factor is the uncontrolled voluntary efforts of the mother.

A method which permits delivery without laceration in the majority of patients is one in which the presenting part has the *smallest possible diameter* and permits the perineum to *stretch and not tear.*

From the time the caput appears at the vulval orifice the patient is watched very carefully and *her efforts directed.* Just enough effort is permitted to gradually and slowly cause the orifice to dilate. Up to the time the occipital protuberance just passes the symphysis the head is naturally flexed on the chest and the smallest circumference, which is the suboccipito-bregmatic (3¾ inches-9.5 cm.), presents. The tendency then is for the head to extend itself and the occipito-frontal circumference (4½ inches-11.5 cm.) followed by the occipito-mental (5½ inches-15.5 cm.) to act as the dilating circumference. The suboccipito-bregmatic (3¾ inches-9.5 cm.) instead of the greater occipito-frontal can be maintained and used as the dilating circumference by continuing the flexion of the head in place of permitting the natural extension to take place. This flexion is maintained by the modified Ritgen maneuver.

One of the common methods of protecting the perineum is to attempt to hold the head back by means of direct pressure on the perineum. All this method accomplishes is to crush the perineum between two forces, the presenting head and the hand of the obstetrician. A better way to retard too rapid advance is by direct pressure on the exposed head.

The Ritgen maneuver consisted of putting the index finger in the anus of the mother, maintaining flexion by direct pressure on the chin of the infant and facilitating delivery of the head by pressure in the line of the outlet. The chief objection to this method is the danger of infection from the finger in the rectum.

The method advocated for maintaining flexion and facilitating delivery of the head is the *modified Ritgen.* This maneuver consists of placing the fingers of the right hand back of the anus and anterior to the coccyx. The hand is protected from contamination by placing towels over the rectum. These towels can be frequently changed. The fingers first come in contact with the malar prominences on the face of the child and as the head advances they follow down to the chin. Flexion is maintained and extraction is accomplished by direct pressure.

The perineum, and in fact the entire vulva, will stretch more easily if they are kept moist with sterile solution. The bladder should be emptied with a catheter if necessary. If the bladder shows a tendency to prolapse it can be held up behind the symphysis until the occiput is free. With the voluntary efforts of the patient eliminated by an anesthetic deep enough to produce relaxation, the delivery is completely under the control of the obstetrician. It can be retarded by direct pressure on the head with one hand and accelerated by pressure of the hand on the chin with the other. When the chin is about to be delivered the occiput is already out and a little more space may be obtained by pressing the neck of the infant up to the symphysis and gently extending the head by pressure on the chin.

A number of dangers suggest themselves with this maneuver. The danger of infection from the hand back of the rectum. It can be entirely obviated by care and the frequent change of towels. Injury to the urethra of the mother from pressure does not exist. The urethra slips back of the symphysis as the head advances. Between the hand and the chin are the skin, muscle, and both walls of the rectum which is more than sufficient tissue to cushion the force and prevent a rectovaginal fistula. Another danger mentioned is that of pressure on the

eyes of the infant. This danger is not great since it is not difficult to find and recognize the malar prominences.

Absolute control of the forces is necessary to success. It is obtained by deep anesthesia of the mother.

With the head delivered some of the danger of laceration is past. At times the head is delivered without a tear only to find it present when the body is delivered. The entire problem continues to be that of getting the smallest circumference through the outlet and avoiding the passage of edges over the perineum. The greatest diameter of the infant's body is the bi-acromial. Measurement of one hundred infants showed a difference of 2 to 3½ cm. between the bi-acromial and the acromioaxillary measurements. The next greatest measurement is the distance between the two elbows with the arms extended at the side of the body.

In the usual delivery with the anterior shoulder against the pubis the perineum is lacerated by the passage of the posterior shoulder and elbow over it. The shoulder which would naturally deliver first, depends upon the position of the head. If the head is permitted to fall over the perineum the anterior shoulder will present first. If the head is held up off the table and supported by the hand of the obstetrician, and it is almost instinctive to do this, the posterior shoulder will present and deliver first. To repeat, it is this posterior shoulder and elbow which is responsible for most tears.

From this it follows that if both shoulders were delivered in the anterior position tears could be avoided.

This can be done and in the following way. After the head is delivered instead of holding it up, let it drop over the perineum and toward the table, the anterior shoulder will invariably present. At the same time the posterior shoulder is pushed back into the pelvic cavity and held away from the perineum. The elbow and arm are delivered by traction on the head in a line away from the symphysis downward and toward the rectum or by direct traction on the shoulder itself. The elbow is delivered by pressure on the posterior surface of the arm depressing the elbow away from the symphysis pubis along the arches and across the chest of the infant. The forearm remains flexed on the arm. With the anterior shoulder and arm delivered, and pressure on the posterior shoulder away from the perineum, the thorax of the infant is pushed up against the symphysis and arch of the pubis.

The posterior shoulder and elbow remain to be delivered. Usually it will do so by passing over or through the perineum. To prevent this the posterior shoulder is rotated until it becomes anterior and is then delivered by the method described for the original anterior shoulder, arm, and elbow. In other words both shoulders are delivered in the anterior position in order to keep both shoulders and elbows off the perineum, and to maintain the smallest diameter at the outlet. The rotation of the second shoulder to the anterior position is accomplished by direct pressure on the shoulder within the pelvis. The line of pressure is toward the back of the infant in an arc upward and toward the symphysis, or, toward the side of the mother's pelvis which is in contact with the back of the infant. The rotation of the posterior shoulder upward can be assisted by traction in the opposite direction of the arm of the original anterior shoulder previously delivered.

The method can be summed up by saying that both shoulders are delivered in the anterior position and has for its object the passage of the smallest circumference through the outlet plus the passage of the soft compressible thorax of the infant in place of the elbow over the perineum.

Summary. Delivery without laceration of perineal muscle is possible in the large majority of normal cases. This can be accomplished by the gradual stretching of the tissues by control of the voluntary efforts of the mother plus manipulation of the presenting parts, which consists in maintaining the smallest possible circumference at the outlet. For the head the suboccipito-bregmatic, and for the body the acromio-axillary circumference which is obtained by delivery of both shoulders in the anterior position.

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Young Hopeful: "Father, what is a traitor in politics?"

Veteran Politician: "A traitor is a man who leaves our party and goes over to the other one."

Young Hopeful: "Well, then what is the man who leaves his party, and comes over to yours?"

Veteran Politician: "A convert, my son."

SURGERY OF THE THYROID IN CHILDREN*

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Thyroid disease in adults we are familiar with and the literature during the last ten to fifteen years has been fairly full of varied discussions of its many phases. However, only in the last few years have we found any reference to this devastating disease in children. In the hope of stimulating a little more interest in these cases which require early diagnosis for satisfactory treatment, I have chosen this phase of the thyroid problem for a brief discussion.

Physiology. Without going into a review of the physiology of the gland may I remind you of the experiment of Gerdernatsch and Swingle in which they found that when tadpoles were fed on thyroid substance there was a rapid metamorphosis into frogs without any associated increase in the size of the animal; and contrary to this thyroidectomized tadpoles continued to grow and become large tadpoles but metamorphosis into frogs did not take place. It is generally recognized that there is a very definite interrelation of the various members of the endocrine family and Biedl states that the thyroid plays the greatest role of all the endocrine glands.

Etiology. Heredity evidently either directly or indirectly plays some part in the disturbance of the thyroid gland. It is not unusual to find quite a group of goiterous patients of the same type or different types in the same family. Sweet reports a case of goiter in an infant at birth one-fourth the size of the infant's head, whose mother had a colloid goiter. Climenko reports a series of cases in one family in which the mother and two daughters and a child of each of the daughters, one a boy and the other a girl, had the disease. It is believed by some that in regions of endemic goiters a lack of iodine in the mother's organism may cause a failure of thyroid development either in fetal life or shortly after birth. The absence of iodine is, of course, one of our pet theories and the frequent occurrence of especially exophthalmic goiter following acute nervous shock or acute illness is recognized.

Hypothyroidism. The hypofunctioning thyroid may be of varied degree. But, regardless of the degree the earlier the diagnosis is made and proper treatment instituted, the greater the hope for improvement. The diagnosis in children is largely a clinical deduction. The avarage parent does not expect much of a baby a few months old and if he appears to be very quiet and slow in noting his surroundings, he or she is said to be a good baby and too young to expect much of. It is quite infrequent even for a pediatrician to see one of these babies before they are six months to a year old. Many of the milder types are not recognized until a teacher notes something is wrong when the child enters school. To facilitate discussion we may divide the symptoms into physical and mental. The mental state may vary from sluggishness to a near imbecile. Engelbach claims that about 70% of the children showing anomalous development during the first year of life, in the following forms, are hypothyroid:

1. Weight of more than eight pounds at birth
2. Eruption of the first teeth later than the seventh month
3. Walking later than one year.
4. The use of short sentences later than one year.

Numerous other signs may be outlined:

1. Late closure of the fontanels
2. Subnormal temperature
3. Cold extremities
4. Dryness of the skin
5. Coarse and dry hair
6. So-called goose flesh skin
7. Late separation of the cord
8. Umbilical hernia
9. Distended stomach
10. Thick tongue
11. Gaping mouth
12. Marked constipation

The extreme of the above findings is of course the cretin with its general distribution of fat, more especially localized to the dorsal of the foot and wrist, supraclavicular region, and the shoulders. The utterance of uncouth sounds, usually rather deep throated and meaningless, should certainly be considered with suspicion.

Diagnosis. The diagnosis has to be based mainly on clinical findings. The x-ray study of epiphyses of the bones may be of considerable aid to diagnosis. The bones of all new born babies who are over weight should be x-rayed, according to Englebach.

Treatment. Treatment may be divided into preventive and curative. There is a quantity of evidence that the study of the basal meta-

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bolic rate of gravid women offers some hope for lowering the incidence of hypothyroid children. McGarrison claims that one out of every twenty goiterous mothers gives birth to mentally defective or imbecile children. He further reminds us that the goiterous girls of today are the goiterous mothers of tomorrow. A normal increase of the rate from plus 15 to 25 at about the third month should be expected. Engelbach strongly maintains that the clinical examination of the expectant mother should include a basal metabolic rate and if found hypothyroid, gland therapy should be instituted.

The result to be obtained from curative treatment of course depends largely on how early it is established. Mild forms with early diagnosis will become practically normal. The physical recovery in delayed cases is much more gratifying than the mental recovery.

Exophthalmic Goiter. Exophthalmic goiter, while perhaps not common, is by no means unusual in children. It is quite often overlooked because it is not generally associated as a child's disease. Some of the so-called choreas on further investigation will be found to be true exophthalmic goiters. In other words, if we are not goiter conscious we may overlook this disease. The causes may be attributed to the same etiology as those in adults. The symptoms are the same as those of an adult: nervousness, emotional instability, heat intolerance, rapid pulse, dyspnea, excessive appetite, increased blood pressure and at times the crisis picture with its many misleading clinical manifestations. Though some writers claim it is more gradual in onset in children, in my own experience it has been very rapid. The weight loss may not be as marked as in the case of adults, due perhaps to two factors: we are dealing with a growing organism, and the natural weight gain of growth may at least partially reduce the total weight loss. On the other hand, the disease is so acute and fulminating that the other symptoms outdistance the weight loss. This may be understood when we consider how readily these young and active organisms respond to a stimulus of any character.

The basal metabolic rates are not of much clinical import in the majority of cases for two reasons: the inability to obtain the proper cooperation which is so essential, and the present type of calculation is not adapted to growing children. It has been suggested that perhaps if the calculation were figured on height alone it might be better.

Treatment. Treatment may be considered, first, as preventive, in the form of iodine administration in endemic areas, and proper medical supervision when there is a hereditary possibility, second, the curative treatment which is surgical with careful premedical preparation. Lugols is administered as with adults. The diet is also increased and a high caloric diet is advisable. It is not necessary to keep these patients in bed, even if it were possible, though they should not be allowed to exhaust themselves. The period of preparation must usually be much longer than in adults. A high fluid intake should be insisted on. Operation should be approached with extreme care as they are susceptible to the least stimulation and may have a very marked postoperative reaction.

On the basis of this many surgeons recommend a two-stage operation. Even in some cases a preliminary ligation is recommended. I have not found this necessary but have adapted my procedure to the particular case and the reaction at the time of operation. We do advise, however, a preliminary narcosis and the operation is then performed under ethylene and local anesthesia. Postoperatively they are treated as adults. Care should be used in not removing too much thyroid in these children, and we make a practice of leaving more gland at operation than we do in adults. The reason is evident. We are dealing with a growing organism which requires more thyroid tissue than adults as the thyroid plays a considerable part in mental and physical development.

Although Helmholz claims that adenomatous goiters never become active in children, Hertzler, on the other hand, claims that at times one of the reasons for the slow improvement in the symptoms in exophthalmic goiter on preoperative treatment in children may be attributed to the fact that we are dealing with a mixed type of case. Adenomatous or cystic goiters are very infrequent in children and rarely, if ever, become active, and when present are usually of fetal origin. Occasionally we have to deal with them because of their pressure or mechanical effect. The adenoma in the thyroid is often overshadowed and included in a colloid

goiter. Once in a long while the child will have a sudden and acute swelling which is the result of an acute hemorrhage. I have had one such case.

Adolescent Goiter. This is perhaps the most frequent type of thyroid enlargement noted in children. And though often mentioned, little or nothing is written on it in the literature. Some think it is a normal physiological enlargement. We feel that it is a fore-runner of more thyroid disturbance. Many goiters in adults date back to the first thyroid disturbance which was noted at puberty as a fullness of the neck. Invariably the presence of a so-called adolescent goiter shows a low functioning thyroid which is not able to stand the strain of the readjustment necessary in the endocrine system at that time. It is, therefore, good reasoning that they may need not only iodine but perhaps a little thyroid until their adjustment at least has taken place. At times in these patients with adolescent goiter we may find what has been called a disfunctioning thyroid which on one examination appears hypothyroid and on another hyperthyroid. This, of course, is the result of an attempt at adjustment of a low functioning thyroid. These patients should be kept under close observation. Care should be used in the administration of thyroid as well as iodine. The presence of an adenoma in the colloid of the adolescent goiter may not be noted until practically all of the colloid may have disappeared with administration of iodine, leaving a small nodular mass in one lobe. Associated with the loss of colloid we may have a hyperthyroid reaction which disappears when iodine is stopped, but the colloid reappears.

Conclusion. In conclusion may I emphasize the following points:

1. This paper is given with the earnest hope that interest may be increased in the study of the diseases of this very important gland in children.

2. That the earlier the diagnosis in hypothyroid cases is made the better the results of treatment.

3. In delayed treatment of hypothyroid cases more can be expected in the improvement of the physical than the mental state.

4. Exophthalmic goiters appear in children and are a more treacherous disease than in adults for the following reasons:

a. It requires a longer period of preparation.

b. The postoperative reaction is apt to be worse.

c. Cooperation cannot be expected.

5. Less gland should be removed at operation than in adults.

6. That adolescent goiter is not a normal physical enlargement but may be considered an indication of future thyroid trouble and should be properly treated and watched.

DISCUSSION

John R. Vonachen (Peoria): From the standpoint of the clinician or pediatrician, I agree with both Dr. Bowen and Dr. Murphy in regard to basal metabolic rates in the young child, but I think we should use these in the older children as a guide post and I think this is borne out clinically by results obtained. If we follow these cases with basal metabolic rates, the average child of eight years and over can give very definite cooperation, and I think particularly in the hypothyroid cases if you follow these cases through after you have given them thyroid extract you will find that your basal metabolic rate will be a good guide for treatment.

What we see particularly also is the type of adolescent goiter which can be guided very nicely by basal metabolic rate. In this type of case I think if we are to advise the patient concerning operation we should go about it in a very cautious way, as so many of these cases improve definitely after they are over the adolescent period.

In regard to adenomas, I agree with Dr. Bowen. If you have a greater enlargement on one side than on the other, and along with this a hypothyroidism and where the adenoma is destroying a great deal of thyroid tissue, I believe we should consider surgery in these cases.

Dr. Bowen has covered this paper very thoroughly and is to be complimented.

Dr. Bowen (closing the discussion): I appreciate the discussion of both Dr. Murphy and Dr. Vonachen. In regard to what Dr. Murphy said, I think we cannot emphasize too much these things. I think the obstetricians perhaps not as a whole, but at least a few, are a little negligent in paying enough attention to this. I realize it is doing away with business for me for the future, but I agree with Dr. Murphy that this is the place to prevent hypothyroid cases, especially in this district.

What Dr. Vonachen said in regard to the metabolic rate is important. It is not, after all, the one rate that means the story; it is a series of metabolic rates. From an economic standpoint these days, it is rather hard. It costs quite a little money to have metabolic rates. Sometimes we have a little trouble in getting patients to spend the money to have a series of metabolic rates, but it is the series, especially in a child with adolescent goiter,

which gives the comparative scale on which to work. Whether the rate in itself as compared to adults is hyper or hypo does not make a whole lot of difference. I shall illustrate in a case of this type.

We had a patient, a girl of ten years, with a metabolic rate of thirty-five minus. Clinically she was not minus thirty-five. This was checked on several occasions and it was found to be still thirty-five minus. On half a grain of thyroid, she improved quite a little. On two grains of thyroid a day, the metabolic rate became normal, but comparatively, on the basis of an adult rate, she did not show sufficient clinical evidence to warrant a return to normal. But for the child itself the comparative rate is very important.

I launched into this subject largely to start some interest in these thyroid problems in the child. We occasionally get a definite case in which there is a seemingly degenerative process in the thyroid which to all intents and purposes is a colloid goiter, but we later discover a tumor in one lobe which continues to grow in size in spite of all medication, and a child progressively becomes more hypothyroid. This type of case I feel should be operated on. We occasionally see typical exophthalmic goiters in children. The youngest I have seen was four years old. This I feel is surgical also with the exception of these two types and the occasional hemorrhagic cyst, and care should be used in operating on thyroid in children.

THE MASTER IN THE HOUSE OF MEDICINE*

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I.

My title makes two assumptions, the first, that medicine still has a house and the second, that there is a master in the house whoever that master might be; assumptions both, which in the minds of some people, are rather violent and require some form of vindication. For there are not a few, who priding themselves on their genius for the obvious, insist that medicine has long since forsaken its house and has walked perhaps in amnesic somnambulance into unaccustomed bypaths trespassing unconsciously upon the domain of the pure scientist, or the sociologist, or the economist, or the legal expert. There are those too, who insist somewhat cynically, to be sure, and with not a little irony, that medicine, in its decadent senescence needs the stimulation of new ideas. They think it needs to be galvanized out of its over-stuffed settee where it has sunken in contented mediocrity watching some of its recent progency flock about, possessing the house that was medicine's, somewhat like Sir Walter Vivian's visitors in Tennyson's "Princess." For Sir Walter

> "All a summer's day
> Gave his broad lawns until the set of sun
> Up to the people; thither flock'd at noon
> His tenants, wife and child, and thither half
> The neighboring borough with their Institute,
> Of which he was the patron."
>
> "And there we saw Sir Walter where he stood,
> Before a tower of crimson holly-oaks,
> * * * * * * * * * *
> A patron of some thirty charities,
> A pamphleteer on guano and on grain,
> A quarter-sessions chairman, abler none;"

Of course this is a strange picture for those of us who still regard our mythological patron, Æsculapius, as the traditional personification of medicine; a splendid personification, for Æsculapius was the son of Apollo, the god of light and beauty and fertility and manly strength. Today, if we had to choose from the galaxy of gods, the one whom our present trends might best inspire us to choose as our patron would probably be the fleet-footed, wingéd-heeled and wingéd-capped Hermes, Æsculapius' uncle, for his were the characteristics of inventiveness and versatility with fascination, trickery and cunning, a god, strange to say, not only of thieves, tradesmen and agriculturists but also of the pharmacologists and perhaps the biochemists if they had them in those early mythological days.

Who now is the master in the house of medicine? The question is today rather interesting because it has been recently answered. The answer has come as the Report of the Committee on the Costs of Medical Care. In its very first dictum under the section entitled "The Philosophy and the Intent of the Recommendations," the Committee tells us that the solution of the problem "of providing satisfactory medical service . . . will be of immense economic and social significance." Economics and sociology are here apparently nominated as masters in the house of medicine. In its first recommendation, the Committee nominates another candidate for this mastership "organization." Physicians, dentists, nurses, pharmacists, hospital officials, should all be organized. In the second recommendation, there occurs still another

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nomination for master of the house of medicine, the official health department around which, as a hub, so one may easily understand the recommendation, the medical profession will wheel us all in our course to universal health. And in the third recommendation, there is still another nomination for this master of the house of medicine, the great god of Finance, through whom the purchase of medical care on a group payment basis, on insurance plans and on taxation schemes is to be made more effective. And I regret to say, in recommendation four, another nominee appears, a weighty one, a dignified and ponderous one, the god of Centralized Control, for we are told that "the study, evaluation and coordination of medical services should be considered important functions for every state and local community." Surely, the recommendations of the Committee have put forth enough nominees for the master of the house of medicine. Each has a platform upon which to base his claim; each has a program which is to form a panacea for some, if not for all the ills from which the old master of the house is suffering; each is prepared to wage a campaign, vigorous and virulent in vindication of his claim to dominance. A formidable array of worthy candidates—economics, sociology, organization, finance, official health agencies, public control. Where among all these is medicine itself? Who owns the house of medicine? And to whom has the house of medicine for centuries upon centuries belonged? Are we to forget the good old adage that "possession is nine-tenths of the law" and that other adage that "a man's home is his stronghold"? To vindicate the rights of medicine, just a tiny voice called the Minority Report was raised. And the Minority Report dared insist that perhaps the master in the house of medicine should still be considered medicine itself.

II.

In making these comments, I would not be understood as under-valuing in any sense the enormous contributions which the Committee on the Costs of Medical Care has made not only to medical economics but even more specifically to many other phases of medical practice; to our understanding of the social relations in medicine and of the public health significance of medical practice, to the inter-relationships between voluntary and official health agencies, to our grasp of the intricate inter-relationships between medicine and many and diverse public interests. On all of these classes of questions and perhaps on many others, the work of the Committee has accumulated vast masses of data which probably could have been assembled so effectively and completely by no other group possessing similar facilities in an equally short length of time. That all of this information is of enormous value in the cultural history of our nation can hardly be successfully denied by any thinking man. If, therefore, the final results of the Committee's activities have failed to commend themselves universally and particularly, if they have failed in impressing the medical profession as a whole, my explanation is only this that the Committee members were carried away by an overwhelming sense of responsibility to the public at large, a sense of responsibility which obscured the clear vision of the means by which the health betterment of that public could be best safe-guarded, namely, the progressive and ever-accelerated development of the one profession to which is entrusted in our scheme of things, the maintenance of the public's health and its restoration to health after sickness.

The Committee understood too well its sociological, its economic, its organizational, its financial and similar problems, but understood too little the character of its medical problem. It saw the masses and forgot the individual who makes up the masses. It saw the distant vision but it saw not the single man who stood close at hand. Enamoured of the future vision, it was blind to the near reality. Carried away by long distance planning, it forgot that such planning is conditioned upon the satisfaction of immediate needs. The far-off mountain seemed so near that the chasm in the foreground was completely overlooked. All this is my view of the Committee's work. It made nominations for the dominance of the house of medicine and forgot that medicine is still and must continue ever to be master in its own house.

III.

Let me single out for special discussion the strategies and sorties of three separate challengers of medicine to the ownership of its house. All three challengers are generals in the socio-economic-political army each leading

his separate division to lend force to his challenge.

The first of these challengers might be called Efficient Mass Production. It must be admitted that he has many seemingly convincing claims to the ownership of medicine's house. The statistical data amassed by the Committee proves perhaps to demonstration that the people need a substantially larger volume of medical service than they now utilize; that modern public health service needs to be extended to a greater percentage of the people and to hitherto uncared for areas; that a geographical redistribution of practitioners and agencies must be effected.

How does the Committee propose to meet these needs? The majority of the Committee recommends that medical service should be furnished by organized groups, these groups to be organized around a hospital for rendering complete home, office and hospital care. This being effected, the community possesses what the Committee itself calls its "most fundamental specific proposal" (page 110), its own community medical center. The Committee suggests the intensive development of medical service, the more effective utilization of subsidiary personnel, the expansion of the private group clinic, of the pay clinic and of middle rate hospital service, organized nursing service, and of clinics controlled by county medical societies.

Are these recommendations a real answer to the needs? They rest, they seem to me, upon a false assumption that mass production can be effected in medical practice just as it can in industry. They lose sight of the differences between human beings and machines, between the physician and the mechanic. We may teach a mechanic to assemble with ever-increasing efficient speed the parts of an automobile and to fit each such part into a pre-destined and preplanned place; we cannot teach the physician to treat the diseased organs of one human being as he would the corresponding parts of another human being even under what are ostensibly the same conditions. Symptomatology was at one time thought to be indicative of a disease; today it has become indicative of an individual's characteristics and constitution. No matter how many patients he has, if the individual doctor fails to treat each of these cases with as much care approximately and with as strong a sense of responsibility as he would have if this were the only patient under his care, the physician has fallen short of the legitimate expectancy of his clientele.

The fundamental reason why the individual patient cannot and must not be treated as a member of a large group is because of his uniqueness. Let us not forget our fundamental biology. Biochemistry, genetics, physiology, pharmacology, the science of immunity, all these and many others of the fundamental and the clinical sciences are insisting with constantly increasing emphasis and with reliance upon rapidly amassing evidence not upon what used to be called the clinical disease entities but rather upon the individuality of each of us. We have learnt to lay less stress upon similarities and more stress upon dissimilarities. In medical practice the laissez-faire adage that "exceptions prove the rule" finds no application; rather does medicine say, when there are exceptions there is no rule. Many a page of biological history has been turned since the day when Huxley could insist that the protoplasm of the cow and the protoplasm of the grass devoured by the cow are the same protoplasm. Our research laboratories have shown us that we can no longer think of one uniform basis of life but that we must look for individual differences in protoplasm when genus is compared with genus, species with species, sex with sex, individual with individual, organs of one individual with the corresponding organs of another individual, yes even, not to labor the point too much, when one cell is compared with its contiguous cell in the same tissues. Medicine has derived from this viewpoint the principles for its greatest conquests. We have learnt to understand constitution, allergy, heredity, hormonal control, the so-called idiosyncracies, all these and other phases of medicine too numerous to mention are each an emphatic insistence upon the differentiation of each of us among our kind.

How then in the face of all of this can we still insist upon mass production and efficiency in medical practice? All that we have learnt recently is a plea for the individual care of the individual patient by the individual physician. Only the latter can synthesize effectively and to the patient's best interests the pieces of the complicated jig-saw puzzle that are supplied to

him through his stethoscope and microscope, through his test tube and stop watch, through his eye and ear and hand. To be sure, there are limitations to this insistence upon individual practice but when the exigencies of modern medicine and the public's needs demand, let us grudgingly rather than gladly yield to the hurry and scurry, the scramble and scuttle of wholesale practice. It is one thing to practice wholesale medicine through need and pressure with regrets for one's neglected ideals, and it is quite a different thing to convert wholesale medicine into a routine which progressively metamorphoses into an established objective. I can also understand that under certain carefully controlled conditions with broadly trained, widely visioned leadership and in an environment of cautious and scientific clinical thinking, the mass practice of medicine can be made to yield results of outstanding value. But I submit that even then those results are achieved not so much through mass practice but rather through the superior leadership in such a group as well as to its superior facilities. The Romans had a proverb which can readily be misunderstood but which nevertheless contained many a germ of many a great thought "quod licet Jovi non licet bovi." We know that the same words in the mouth of poet and peasant have a different meaning, the same action of banker and baker a different significance. The efficacy of medical centers does not rest in the institution as a medical center but it rests in the mental and material soil in which it is planted, in the administrative offices where presides the controlling mind and heart, in the laboratory where the chemist, the pathologist and the clinical microscopist sees or sees not the facts that are revealed to the understanding eye. To recommend the development of medical centers and to ignore a recommendation for the installation of those within the medical centers who alone can give them meaning and life, is to me nothing more than to build caskets for our defunct ideals.

There are many other considerations which might well enter into the story of mass production's onslaught upon the mastery of the house of medicine. Let me pass them over with but a brief mention. I can think of mass practice of medicine as advocated by the Committee for general adoption as nothing else than merely yielding to the present needs at the sacrifice of future good. I can think of it only as offering a prognosis of progressive deterioration in ideals, as a shield for the less able, the less industrious, the more mercenary in medicine, so that they might hide behind the men of solid achievement, of continued application and unselfish dedication. Let us not lose sight of human nature. Of all the professions, medicine is perhaps the one in which insincerity is most promptly uncovered; perhaps the one in which the blackness of incompetence and quackery is most easily dispelled by the bright light of science; perhaps the one in which the stumbling of the stupid is made more easily apparent. Yet with all this, medical men are still human and as long as humans are, the easiest way will be for all too many the way of choice.

Mass practice must never dispossess medicine of its ownership of its house.

IV.

The second of these challengers to the ownership of the house of medicine is Organization. All through the Report and the many other studies which lead up to its final formulations, thoughts are stressed that our difficulty is not so much with the number of individuals concerned directly or indirectly with practice of medicine, but rather with the lack of coordination of effort in this vast personnel of more than a million. All through the keynote is sounded that it is not so much inadequate expenditure as it is ill-advised expenditure which has brought our needs to unbearable urgency. And so the shibboleth echoes through the recommendations. "Organize everybody and everything; organize the doctors, the dentists, the nurses, the social workers, the pharmacists, the hospital officials, the midwives, the hygienists; organize resources—the buildings and grounds, the laboratories and admission offices, the hospitals and social centers, the out-patient cubicles and the in-patient beds; organize the funds—donations and dues, patients' payments and community contributions. Organize the community itself for better health care. Break down the barriers of race and creed of national and political affiliation."

Now it cannot be denied that if the voice of some great dictator were to ring with the force of Gabriel's trumpet through the hills and vales

and plains of the land, much might be accomplished through organization. And yet, like the faint trilling of the cardinal on a late spring sunny day above the roar of Niagara's Falls comes the plea of the Minority, whispered through the thunderous boom of the Majority for the restoration of the general practitioner to the central place in medical practice. With what timidity the poor Minority must have written its fourth recommendation! Surely, they must have felt as sheepish and apologetic as if they were recommending the substitution of a horse and buggy for the modern palace on rubber tires. They could not but have felt as timid as if they had called for side burns, Prince Albert and silk hat as substitutes for the dapper toggery of the just doctorated medico. And yet, the general practitioner owned and some of us think still owns, the house of medicine.

First of all, I cannot bend my good Catholic knees before the god of Organization. It is true we have long since celebrated his apotheosis, but something must have happened when he reached Olympus. Today, like Vulcan when he was shown the door and came tumbling down, organization limps. Somehow we have lost confidence in his omnipotence and perhaps some of us are even sacrilegious enough to deny him divine honors. The catastrophes of the last few months have made scoffing skeptics of us all. And now we want to organize medicine and to organize it not as biology teaches. All true organization must be effected through the pressure of internal forces through which the organism is maintained and not through the coercive pressure of external forces which molds inert matter alone into forms and shapes. I contend that the profession of medicine is not as yet inert matter; it is still a living, vibrant group of men who know their own minds and hearts, their own ambitions and longings, their own capacities and achievements. Yes, I too desire the more efficient organization of medicine but I want that organization to come not from without but from within the profession. I want the profession to differentiate itself to progress to ever more refined forms of specialism, but all this in response to the superior needs of the profession working out its own destiny for the betterment of its own service to a community standing in need of that service and not through the pressure of alien forces that would mold it like passive clay into mere caricatures of the sublime form which it has set as the goal of its own development. Again, I say, let us not forget our biology. Organization from within never destroys the morphological and physiological traits of the developing organism but brings them rather to their termination. Organization from without restricts, contracts or expands here and there in response to pressure variations and the resultant may be a misshapen mass. Medicine as we have it today in our country has fulfilled a great destiny. It is all but unintelligible that now when medicine is celebrating day after day progressively greater triumphs and is giving progressively more convincing evidence of its interior life and is even in the face of the restrictions and privations of the last few years, humbly glorying in the fact that it alone among the major forces in human society has preserved the health record of the nation at a level of excellence never before achieved, we should be clamoring for more organization. It seems little short of blindness to facts that just when medicine has best shown that it can use its liberty and depends to a degree equalled perhaps in terms of service by no other of the professions dealing with man's physical life, we should attempt to shackle its freedom.

The question clearly is this, shall the mastery of the house of medicine be entrusted to the individual practitioner or to a sort of house committee which might be called for convenience some form of group clinic? Strange to say, both the Majority and the Minority groups unqualifiedly endorse the maintenance of the personal relations between the patient and the physician. It is amazing what different meanings these two groups have discovered in this personal relationship. Old Aesop was right when he said that a great deal depends upon whether the song, though it may be the same, comes from the throat of starling or of crow. Somewhere in the definition of a satisfactory medical program the Report tells us that (page 39)

> "preservation of a personal relationship between patient and physician is an essential element in safeguarding the quality of medical practice."

Then the Committee goes on to define this medical practice and suggests two phases of medical practice as essentially embodying this personal relationship. First, the safeguarding as

inviolate of the privileged communications between patient and physician and secondly, the continued mutual responsibility between patient and physician. It states expressly

> "the business relation between physician and patient is not considered a necessary part of the personal relation."

As if to strengthen this position a few paragraphs further down the Committee again comes back to the question

> "there is nothing in any way mysterious in the relation between a patient and a physician. On the therapeutic side it is capable of complete objective analysis. As to those phases which are not strictly medical, it is of a piece with all satisfactory human relations involving as they do mutual patience, sympathy, understanding, and confidence." (Page 41.)

The Minority seems to take a somewhat different view (page 169)

> "By personal relationship is meant that bond of sympathy and interest in the patient's welfare on the part of the physician, confidence in the ability, integrity and discretion of the physician on the part of the patient, and mutual regard on the part of each for the other which cause the patient to disclose for the purpose of diagnosis and treatment the most private and confidential information concerning himself and his surroundings when necessary for proper diagnosis and treatment. The character and personality of the physician is a major factor in its development and in process of time and continued contact as patient and physician a friendship and intimacy develop that assumes priestly characteristics on the part of the physician—the characteristics of the confidant and adviser in the most intimate personal and family relationships. All phases of personal and family life are at times closely related to the diagnosis and care of an individual's condition, and economic and financial conditions are often as important in diagnosis and care as physical or mental abnormalities. It is an individual relationship, the product of character and personality and cannot be transferred to a group or fostered by group practice."

Again let us remember our fundamentals in biology. We have heard it stressed ever so often in the days of our undergraduate courses that the organism's reactions at any one time are the product of internal and external forces. Not one added to the other nor one multiplied by the other but one set of forces integrated into the other in the sense in which calculus perhaps teaches us to integrate. There is this strange fact in the interplay between organic and environmental forces, that, as the organism reacts to an extrinsic force, it itself changes and forms not the same old, but in many respects a completely new source of new reactions in the second instant of an extrinsic force's influence. There is progressive change in the organism during the separate and separable instants of the organism's reactions. If we have learned to view disease and illness from this viewpoint we see the fundamental correctness of the analogy I am here suggesting. It is not enough for the physician or the social worker assisting the physician to have once determined the external environment of the patient, to have tabulated these and classified those conditions, but all through the patient's illness the progressive changes under the stimulation of the new environmental factors must be studied, not only with relation to the pre-sickness condition of the patient but also with relation to the gradual organic modifications. If I should care to admit, for the sake of argument, that much of this is largely theoretical and difficult to reduce to practice, I still maintain that it is a fundamentally sound conception and one which consciously or unconsciously the physician who is in close, intimate touch with his case not only understands but actually uses. The modifiability of the patient's behavior under medication, the antagonistic or synergistic action of drugs, the psychological interplay between patient and physician, between nurse and physician, between patient-nurse-hospital personnel and physician, all these, and many other examples that may be offered, illustrate the principle that during the therapeutic processes not only environmental conditions, but the organism itself is changing and is being made the center of a constantly shifting and changing set of reactions. To my mind the Minority has more closely grasped this very fundamental thought when it says

> "that all phases of personal and family life are at times significant in therapeutics"

and I believe the Majority has profoundly failed in its formulation when it insists that on the therapeutic side the relationship between patient and physician is susceptible of completely objective analysis. There are more intangibles in sickness than there are in health and these intangibles become progressively multipliled the more serious the patient's condition becomes, to reach a climax of complexity as the final moments of life are approached, even after the physician has explicitly or implicitly pro-

nounced his inability to cope with the disease. I for one should not want to be responsible for the effect on the nation if this phase of medical practice is minimized nor should I desire to be responsible for the blurring of that idealism in the life of the physician or in darkening of the public's attitude towards it which would result from making light in any way of the sanctity, and if need be even the mysteriousness of that relationship between the sick man and his doctor.

If some one wishes to tell me that I am confusing two ideas in this presentation, namely, that I am assuming that personal relationship can be maintained only in the face of the general practitioner's place in medical practice, I have many reasons ready for my position, some debatable and, to my way of thinking, some entirely undebatable. Only one do I wish here to single out and that is the testimony of the Report itself. I have called attention to the fact that both the Majority and the Minority insist upon the maintenance of personal relationship. The Minority draws from that principle the conclusion that, therefore, the general practitioner must be returned to his central place in medical practice. The Majority was able to use the principle in its advocacy of some form of group practice only by attenuating the meaning of that relationship and giving it a definition which, while not invalidating the logic of the argument, still negates as I see it, all that we have been accustomed to think of when we insist upon the importance of the personal relationship between physician and patient.

If now we insist that it is impossible under the present conditions in the practice of medicine to restore the general practioner to his place of honor even if we wish to do so, my answer is plainly this, that unless we do so we must be prepared for a re-definition of the practice of medicine from sources that are not medical. We must be prepared to give up what we have hitherto understood by the term medicine and we must accept in its place all the inferences and correlaries that will grow from the conception of group practice. The Minority has suggested that the general practitioner can be restored to his place even in the face of the present complexities of diagnosis and therapeutics. It recommends not only intensively better preparation for the medical man and a growing sense of responsibility among medical educators for supplying the needs of the nation, but particularly does it call attention to the fact that in our medical curricula the stress must be laid rather upon the practice of medicine than upon the practice of specialty, rather upon the organism as a whole than upon its histological, or physiological, or biochemical or bacteriological reactions. This does not deny the validity and dignity and the deep significance to the nation's health of progressive specialization but, as I have already said, it is one thing for specialization to emerge from medicine's epigenetic self-determination, one thing for specialization to be the outgrowth of recognized needs in practice, and quite a different thing for specialization to be the resultant of extrinsic coercive forces or merely the pro forma denomination adopted to make the letterhead of group clinics more impressive to the public.

Who is master in the house of medicine? I hope and pray that the general practioner with all his faults and all his shortcomings and all his limitations may still continue as the central dominating figure in the house of medicine.

V.

Ringing through the Committee's discussions like an obligato in a minor key runs the motif that builds itself up slowly but surely into a haunting spectre and that haunting spectre is the tremendous charge that the practice of medicine as heretofore in use is out of date. And oh, what more terrible thing could be said of any social factor today than that it is hoary haired and senescent. And against the background of this charge there emerges the third claimant to the mastery of the house of medicine, sprightly, spruced-up, spick and span, the claimant of professional evolution. Commentators on the Majority Report have stressed so often the thought, that they advocate, to be sure not radical revolution but only progressive evolution. Perhaps our sympathies go out more to these claims for the mastery of the house of medicine than to the others because our sympathies go out to youth but perhaps also wisdom of age might speak just a word of caution, even in this day when we are living in the age of the young man.

The argument, I suppose, should run some-

thing like this. We have passed from an age of super-individualistic to an age of sociological thinking. We have by dint of common effort succeeded in bringing the sociological viewpoint into legislation, into commerce, into international relations, into labor and trades, into school and churches. Through extensive propaganda, we have succeeded in all of these human endeavors to substitute a consideration for the masses instead of the old considerations for the individual. Why should we leave the profession of medicine out of this universal social flood? Why should medicine stay behind in this forward movement?

On the face of it there is something intensely attractive in such a formulation. I submit, however, that there are considerations which will show that medicine cannot wholeheartedly and completely participate in such a drift if it desires to remain true to itself. I cannot accept the principle that a something is desirable just because it is new. I am still enamored of the Coliseum and of the pyramids and of the monuments of Assyrian culture and even of the art of the cave man in the Pyrenees. I have a suspicion that some of the things of life which I most value were just as valuable to primitive man, and so I am not over-impressed by the claim that medicine must have a new viewpoint, an eye to the future. Of course, neither am I blind to the fact that we are living in the year 1933 and that we are expecting to plan for at least a year or two more in our educational program in medicine, but it is one thing to say this and quite a different thing to plan for 1980 when between then and now there still intervene a few years. Haven't we become just a little fed up on this long distance planning and on directing the nation's course for half a century? We have even become a little skeptical about the five-year programs both on the international as well as upon national levels.

Now of course we all want to be modern but are we going to forget that the future is a child of the past, are we going to forget that the true view of history teaches us that history is a prophecy rather than merely a record? There are certain phases of life that must run on continuously and uninterruptedly through human experience, and fundamental principles cannot in any true evolution be completely ignored. I know we are living in a sociological era, in an era when economic factors and sociological factors have developed a significance which perhaps they have never had before. I know, too, that sociological and economic thinking have found their way into medicine. With all of this I am in complete and hearty accord. I hope all this may continue.

Let us again examine the situation briefly from the viewpoint of what seems to be incontrovertible principles. A profession, like an organism, must adapt itself to progressive changes. Let us note, however, that the first and foremost requirement for adaptation is the organism's or the profession's self preservation. Change is significant only if the organism remains. If the organism does not adapt itself to changing environment it will destroy itself. But note too, and here is the point upon which I am throwing the emphasis, if the organism over-adapts itself it will also destroy itself. Adaptation does not mean a merging of the organism with its environment. Essentially it means the maintenance of a measure of isolation, the maintenance of individualizing traits and characteristics, the maintenance of internal factors which must not so yield to extrinsic factors that they are completely neutralized. On the basis of this analysis I insist that medicine is not sociology and medicine is not economics and medicine is not organizational efficiency and that the future of medicine, the real progressive evolution of medicine, demands that medicine be allowed to develop as medicine and not as merely an adjunct to social science. I am not one of those who insist upon pigeonholing into separate compartments the diverse and varied interests of mankind. Human interests must not be kept in hermetically sealed compartments. But recognizing all of this, we must still insist that neither are we furthering progress by obliterating the individuality and the differentiating characteristics of the many vocations and avocations which concern themselves with the contrasting phases of life.

Pursuing this thought a little farther, I should like to insist that medicine must become progressively conscious, if necessary emphatically conscious, in the face of popular clamor, of its own intrinsic dignity. It has a character to maintain. If "noblesse oblige" is still the watchword it was, then the medical man had better not make himself the tool of an insurance

agency, had better not make himself an underpaid servant of a policy holder, had better not make himself merely the scribe to whom a financial power dictates what he is to write into the blank spaces of an accident report. Not in that direction lies progress no matter how much we clamor that this day is the day of social thinking and financial remedies and corporate relief. I might add paragraph upon paragraph on this point. Let me briefly summarize a few of the views which have grown out of the principles advocated by the Minority, some of them clearly expressed, others barely implied. An insurance plan which takes away the freedom of the physician in his practice of medicine and substitutes financial expediency for medical policy is not good medicine and I believe, is not even good insurance. An insurance policy which takes medicine out of the central place in relation to the patient and relegates the medical practitioner to the periphery of interest leaving the premium collector at the hub of the wheel is bound, I think, sooner or later to throw the medical man off of the wheel altogether and leave the financial agent in charge. Plans for part or deferred payments which substitute financial need for the patient's medical need, which elevate financial administration to the commanding position in place of medical care, are to me, not signs of progressive evolution and thinking in terms of up-to-the-minute values but they are to me, symptoms of medical devolution. When such plans and schemes are in force you may be purchasing something for your policy holder but you are not purchasing adequate medical care. I can concede that under certain rather well defined circumstances some form of corporate practice in medicine or corporate payment for medical service is clearly indicated. It is one thing to let such plans develop in response to local or general needs. It is a different thing to elevate such a situation to the dignity of national policies.

And anyway, is economics after all so much of a god to be worshipped? There are other values in life besides the dollar sign and I have a suspicion that they are just as much up to date. Money after all is only a symbol of barter. We may barter away through money exchange some of the things which even money later on cannot buy back. Let the idealism, the self-respect of the medical profession, its quasi sacred character, the passion for excellence be traitorously sold for silver and you may well find yourself the instigator of a crucifixion not merely of the profession but also of the public's welfare. We are not of those who must by virtue of our dependence upon public opinion allow themselves to be wafted hither and thither by the ever veering breath of public opinion. We are rather the leaders and teachers of public opinion. It is not for us to yield but to lead, to educate, to idealize; our eyes are not to be cast down on the ground. Our feet, it is true, must rest on solid ground lest we drift away into aethereal regions of impracticality but our eyes must be up-lifted and our hands must be raised not to point out the paths where the masses will tread without us but those paths of higher achievement which mean progressively higher and nobler things in life.

VI.

And so, gentlemen, I have put before you the claims of three pretenders. I believe personally that their claims are weak. I believe that their following is half-hearted, that the resources behind them are inadequate to cope with the responsibility which they foolishly and ignorantly desire to assume. And I for one am prepared to vote them out of the mastery of the house of medicine and to leave medicine in control of its house.

WHAT I WOULD TELL A LAY AUDIENCE ABOUT VENEREAL DISEASES

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I would tell them that in Illinois there are annually 13,000 fresh cases of syphilis,[1] and it is estimated that there are 643,000 cases of syphilis and 474,000 cases of gonorrhea constantly under medical care in the United States.[2] I would tell them that venereal disease is no respecter of social position, wealth or education; that the spirochaete is equally damaging to the diplomat and to the street cleaner. Venereal diseases are infectious and accordingly constitute a public health problem; and "the future of the public health campaign depends more than on any other one thing upon the development of a technic for ending the infectiousness of a patient within an hour after the first treatment, and keeping it ended, simply,

briefly, and painlessly."[3] If we are to accomplish this we must take the public into our confidence, explain the dangers of venereal disease, publish the facilities for treatment, and secure their voluntary co-operation in eliminating the diseases.

In the past and even today many factors have conspired to prevent the education of the public concerning venereal diseases. Shame and disgust have been and are associated with the acquisition of these diseases in the minds of men and women, and the so-called respectable classes have deluded themselves with the assurance that venereal disease cannot touch them. These diseases are closely associated with sex and it is only since the beginning of the Great War that we have rid ourselves of prudery and sex has become a discussable subject. Perhaps the factor most harmful to a successful publicity has been the temptation to discuss venereal disease as the heavy penalty for deviation from the path of virtue, which it is not. The "seasoned" sinner is too clever to pick up a venereal infection. More often it is the inexperienced teen age girl and boy, the bride, or the innocent child. We must not confuse sin, a spiritual defection, and disease, a physical manifestation.

An effective publicity must reach the adolescent and the girl and boy in the late teens and early twenties. Statistics here and in England show the greatest incidence of primary venereal disease infection lies between 20 and 24 years, with the peak among the females a trifle earlier than among the males.[4] Therefore, if we are to prevent disease we must reach the adolescent and the youth in the late teens and the early twenties *before they are infected.* And we must not forget that the youth of today lives in a highly colored, rapidly changing age. The pendulum has swung far from the gloom and excessive restraint of the Puritan to a period wherein major stress is placed upon self-fulfillment and sexual passion regardless of any solemn obligation to others that might be a deterrent to that goal. The literature, periodicals, theatre and cinema are loaded with skillfully worded appeals to the imagination and sentiment of the young people. Those of us who know the forlorn, diseased girl who has trespassed the moral code as we see her in office, clinic or hospital practice would never recognize her made glamorous and desirable by our Garbos and Bankheads; and we can hardly expect the romantic, imaginative youth with fired emotions to exhibit discriminatory judgment. Our teaching of young people must be sympathetic of the times and tactful if we are to inspire the desire for prevention and cure.

I asked a young mother, intelligent, college trained and in the comfortable surroundings of a middle class family, what she would like to know about venereal diseases. Her answer was: "What they are; can they be cured; and how long does it take to cure them?" If we accept her challenge and answer her question, we shall have contributed to the education of the public.

Syphilis and gonorrhea are the important venereal diseases. There is so much that is of interest concerning syphilis it is difficult to select that which will be most practical. The disease is not easy to diagnose because of its multiple manifestations. We should make it plain that syphilis attacks all ages, from the fetus in utero to the senile with one foot in the grave; that it attacks all tissues from the highly specialized brain structure to the humble, sturdy bone; and, therefore, no physical examination at any age is complete without a *Wassermann-Kahn* test. And remember that one negative reaction does not rule out syphilis.

At no age is this test so important as in the pregnant woman. She should be taught to demand a blood test when she presents herself for the first examination and also when the pregnancy has progressed six months. The presence of syphilis in the pregnant woman demands intensive treatment.

Every adolescent girl and boy of ordinary intelligence should know that repeated abortions in a woman may, and usually are due to syphilis; that the high mortality at birth and within a few hours of birth may be attributable to syphilis; that the underweight, dull and muddy skinned *newborn* with a puny, wrinkled and creased face is a syphilitic child, and as such owes its condition to syphilis in one or both of its parents. We should teach that treatment of the syphilitic newborn usually is futile, and that, therefore, the *prevention of syphilis in the newborn* lies in its detection and treatment in the parent. With the almost universal use of the serological test many more cases of syphilis are being recognized early.

Early Congenital. Even though treatment has been intensive in the mother and the child looks all right at birth, the stigmata may appear in a few weeks, the bullous lesions on the palms and the soles, the condylomata at the anus and the snuffly rhinitis. Treatment is available for this child and should be intensive for 18 months with constant observation thereafter, because congenital syphilis may manifest itself anywhere between birth and thirty years of life, though most of the late congenital syphilitics will show symptoms between 10 and 18 years with the maximum at 12 years. Syphilis tends to heal itself with time because of the immunologic processes in the body, but we must bear in mind that if the child survives the early period of infancy he may be seriously handicapped by keratitis, perhaps the commonest complication and which occurs in 52% of cases, or impaired hearing in the adolescent years. There is always the possibility that he may be mentally deficient, or that which is more difficult to recognize may not quite measure up to our standards for adult life and as a consequence be one of the numerous problem people unable to adjust to the complexities of society.

So long as we in the clinics and private practice meet with innocent children, handicapped for life by physical and mental ravages of syphilis, so long are we challenged to educate the public. The only *real cure of congenital syphilis* lies in its prevention, and if not prevention, then early detection and treatment. Educate the boy and girl to know about syphilis long before they are fathers and mothers. Teach them to demand anti-nuptial health certificates based on a physical examination and a blood test. Make our laws universal so that this may be a law in every state and not only in some far-seeing states as at present. It has been suggested that we establish consultation centers for those contemplating matrimony. When two people are in love it is a trifle optimistic to believe that we can point out dangers ahead, but the center would focus attention on the necessity for examination, and might make a man or woman think twice before knowingly infecting his partner.

Examine every pregnant woman early in pregnancy. Make a Wassermann-Kahn test on both father and mother, and be painstaking enough to repeat it later in the pregnancy. Treat the pregnant women who are syphilitic. Observe and treat, if necessary, every syphilitic child until he reaches puberty. And let us as teachers tell the public that a program less inclusive is hazardous.

There are many false notions prevalent today about syphilis. We must make known that the chancre is a painless, unobtrusive sore. That the extra-genital lesion is not at all uncommon. The chancre of the lip may be mistaken for a simple cold sore and the mucous patches in mouth and throat for canker sores; yet, these are the most highly infectious and menacing manifestations of syphilis. Rarely is the newly syphilitic ill nor is his skin littered with sores, as the average lay person expects. People as a whole are more likely to be frightened by the unsightly skin manifestations of psoriasis rather than by the roseola. The roseola that appears in secondary syphilis, especially in women, may be so faint as to almost escape detection even in excellent light and with the trained eye of the physician. On the female genitalia the chancre may be a minute, linear abrasian defying detection. Every moist lesion on the female genitalia should be considered a potential chancre or early secondary lesion until ruled out by microscope and serologic tests.[5]

We must teach the public to demand dark field examinations. All of us admit that the best hope for cure lies in early treatment before the spirochaete has fortified itself in the tissues, and too often in our zeal to cure we have been guilty of giving arsenicals before the blood test is positive and without a dark field examination. Good judgment demands an absolute diagnosis even though it threatens the effectiveness of the cure. Recently I saw a patient whose husband developed a genital lesion while he was on a vacation in a distant village in western Canada. The history was positive for recent exposure, the serologic test was negative, but the examining physician thought the lesion typical. Dark field examination was not available nearer than 150 miles and the patient was short of funds. The sincere doctor gave a course of arsenicals and advised observation of the wife, my patient. Now after six injections of neo-arsphenamine with a blood still negative this man has recovered from his remorse over his immoral act and his fear of the spirochaete and is convinced he never had syphilis. He re-

sents being "rushed into" treatment and no amount of persuasion on our part can convince him that he is a menace to his wife, to his healthy child and to future children that may be born of his marriage. We cannot criticize the doctor. He did what any one of us would have done in similar circumstances. The dark field is the "missing link" in the chain.

Hitherto it has been difficult to obtain dark field examinations because of the costly equipment, the time and skill required in collecting the chancre fluid, and last but not least the skill of the microscopist, for it does require skill and experience to detect the spirochaete even though you may have it corralled on the microscope. We are hopeful of improvement in our facilities in this trying problem. Riehl,[6] in 1919, experimented with the viability and longevity of the treponema pallida and described a method of using a glass pipette in which to collect and preserve the chancre fluid. In 1930, Mahoney and Bryant[7] collected chancre serum in glass capillary tubes, closed the ends of the tube by pressing it into a soft 50% paraffin-vaseline mixture for a distance of about 1 centimeter, and stored the tubes in a refrigerator at 4 degrees centigrade and at room temperature exposed to the light. As late as 96 hours they were able to find characteristic, distinctly motile treponema. The specimens stored in the ice chest kept best, naturally, but those kept at room temperature and exposed to the light rendered acceptable preparations for dark field examination. The method is worthy of the further study that is being given to it, and from this we are hopeful that physicians in remote places and that those in cities without facilities, and whose patients may be unable to pay, may be served with dark field examinations through the Public Health Departments as they now receive blood tests. Thus accurate diagnosis will be assured at a time when the chances for cure are best.

We know the opportunity for cure lies in early diagnosis and treatment. The possibility for cure is in exact mathematical relation to the time of instigation of treatment. It is not important that large quantities of treponemocidal remedies be introduced into the patient's body, but that the drug be given at an opportune time, i. e., when the spirochaetes are accessible. It is impossible to make an accurate statement as to cure because with the ability of spirochaete to attack any and all tissues, all varieties and types of syphilis are possible and there must of necessity be varying criteria of cure. We can say to the public that early syphilis, from the time of appearance of the chancre to the first weeks of the roseola may be cured by intensive treatment. In later stages it is more honest to say that many of the symptoms can be cured, but the disease itself will remain latent in the tissues. Professor Warthin,[8] after making necropsies on a number of patients who had latent syphilis, stated: "No case of perfectly healed syphilis has been discovered. Whether a consistent 5-year period of treatment would finally rid the body entirely of spirochaetes is still undecided. None of the cases had been under continuous treatment for that length of time, but many had received what is regarded by the clinician as thoroughly satisfactory treatment, with complete clinical cure."

We must, however, be guarded in our statements as to the curability of late syphilis. Any pessimistic statement on our part would be followed by a lack of interest in treatment, a "what's-the-use" attitude. We must teach the necessity for prolonged treatment and observation.

Gonorrhea: We find gonorrhea in the *New Born.* The eye provides a fertile soil for the propagation and growth of the gonococcus, and in the passage of the child through the birth canal the eye is exposed to any infective agent that may be present in the genitalia of the mother; hence, ophthalmia neonatorum. An irritative process is set up and very quickly followed by enormous swelling both of the lids and the mucosal lining of the eye, making impossible the closing of the eyes and even the edematous mucosal lining of the lids may bulge through the imperfectly closed palpebral slit. Profuse purulent secretion escapes. The pressure on the cornea is so great that ulceration follows, and unless intelligent and vigorous treatment is instituted immediately blindness or impaired vision results. Frequently with our best therapeutic efforts complete disorganization of the eye is our reward. The time is so short between the time of infection and the development of these serious, uncontrollable symptoms that no time may be lost in caring for this very hazardous complication. We have

an efficient *preventive* in the silver nitrate drops, and the incidence of blindness in children in the U. S. due to ophthalmia neonatorum has been reduced from 28.2% in 1907 to 7.5% in 1931.

One would think it quite unnecessary to discuss this treatment, yet, incredible as it may seem, a state as enlightened as our own Illinois has not hitherto had a law requiring the Credé treatment. Prejudiced people have objected on the basis of its enforcement being an infringement of their constitutional rights, and we have 15 times as much ophthalmia neonatorum as New York State and 11 times as much as Missouri, both states requiring the Credé treatment of the newborn. When a bill for Credé was presented to our State Legislature in 1915 the objections of the anti-medical group resulted in the law being amended to "require that cases of ophthalmia neonatorum must be reported," presumably so that if the serious complications I have enumerated did develop treatment could be given at once in an effort to prevent blindness. Yet, as I have said, the time is short between the time of infection and the appearance of very serious, and difficultly controlled symptoms. In the 1931 Session the Bill again was presented and failed of passage, but the recent 1933 Session of our Legislature gave the Bill approval and sent House Bill 161 to the Governor for his approval to the end that every child born in Illinois must have the Credé treatment not later than one hour after birth or the person responsible for its omission be subject to punishment. Thirty-five (35) states have mandatory laws or ordinances for this treatment of the newborn's eyes, and Illinois will bring the total to thirty-six (36) states. We must lose no opportunity in speaking to lay groups to encourage favorable publicity for this law. Explain why it is essential to give this treatment that does so much good in the way of prevention and certainly does no harm. Let every mother and father know of its importance and desire Credé for his and her child.

Then we see vaginitis and vulvo-vaginitis in the female infant and child. Rape is thought the most constant source, but more commonly the contaminated hands of a careless nurse-attendant, a soiled bedpan, linen, thermometer or toilet seat are the mode of transmission, and children who sleep in the same bed with an adult infected with gonorrhea have been known to become infected. It is most frequent, of course, in institutions and camps where children are crowded together, but occasionally we see it in private practice where the observance of personal hygiene and adequate sleeping arrangements are factors in preventing the dissemination of this disease.

The vagina in the female infant and child is paved with a modified squamous epithelium on which the gonococcus finds a fertile soil. At puberty this epithelium becomes cornified and changes to the more resistant epithelium found in the adult. If the gonococcus is deposited upon the genitalia of the child it sets up a violent and obstinate condition, evidenced by a profuse and purulent discharge from the vagina and by a hyperemia and injection of the mucosa. The child complains of pruritis and burning on urination, as the profuse vaginal discharge makes its appearance. The skin of the surrounding areas becomes excoriated due to the irritation initiated by the discharge, and the inguinal glands may show hypertrophy or in rare cases suppuration. The diagnosis is based on the clinical findings and the positive smear, though the history in some instances may aid. Inasmuch as gonorrhea vulvo-vaginitis is a reportable disease and its presence prevents the child from attending kindergarten and school the diagnosis must be clear cut. We must not forget that infection with bacillus catarrhalis which is very difficult to distinguish in the smear from the gonococcus, the meningococcus, streptococcus, pneumococcus and the ubiquitous coli may cause similar symptoms; also, that while the gonococcus may be the original invader of the vaginal tissues and initiates the pathology, in no time there is an invasion of secondary organisms which continue the pathology. The child is entitled to an accurate diagnosis so that, if infected, her health may be preserved; her family, because of the expense and inconvenience entailed; her schoolmates, on account of the danger of infection. In cases resistant to treatment we must make use of the culture and fixation test to rule out the infectiousness, so that the child may not be kept from school beyond the actual time she is a menace to others.

Treatment of vulvo-vaginitis in the child is necessarily slow. During the acute process there is much pain and tenderness; the child is

easily frightened; many of them are inadequately trained and hard to handle. These factors, plus the smallness of the parts rendering instrumentation difficult, combine to make treatment of the child a process that requires patience. Adequate and painless treatment may make it necessary to slit the hymen. Often at first the most we can attain is mere cleanliness of the parts until by tactful persuasion and gentle treatment we can win the co-operation of the child. We must warn parents and teachers that there is a tendency to chronicity in this disease; that response to treatment, however expert, is very slow and there is always a possibility that the latent infection will recur if the child is attacked by some acute infection associated with a high febrile reaction.

Aside from the physiological aspect of the condition there is the psychic problem. The very necessary treatment focuses the attention of the child on her body and especially on her genitalia in an unfortunate manner. The constant irritation of the discharge, rubbing secondary to the pruritis and the handling of the parts in the treatment easily may lead to the unfortunate habit of self-abuse. "Small children, whose attention has once been directed to their own genitals—usually by masturbation—are wont to progress in this direction without outside interference, and to develop a vivid interest in the genitals of their playmates." As the occasion for the gratification of such curiosity is generally afforded during the gratification of both excrementitious needs, such children become voyeurs and are zealous spectators at the voiding of urine and feces of others. After this tendency has been repressed, the curiosity to see the genitals of others (one's own or those of the other sex) remains as a tormenting desire which in some neurotic cases furnishes the strongest motive power for the formation of symptoms." [9]

Gonorrhea in the adult female is a curse. Our hope lies in the research of the future. At present our efforts to cure are at best futile attempts to stem it ravages. The numberless operations of varying degrees of mutilation in even young women are ample justification for a comprehensive program of teaching. The adolescent and youth in late teens and early twenties must be taught that gonorrhea is the most common cause of sterility and invalidism in women. Gonorrhea is infectious only in the moist state; when dry it dies. Therefore, it is transmitted exclusively by contact and for this reason we know that gonorrhea in the adult female is in 99% of cases the direct result of sexual intercourse with an infected male. Teach the boy and young man that it is a crime to infect his partner.

The large area of tissue receptive to gonorrhea infection in the female genital tract makes possible a variety of clinical pictures, depending upon which part of the tract is chosen for the pathology. The folds of the introitus and especially those enveloping the urinary orifice afford a lodging place for the infected discharge. The mucosa of the urethral meatus is an extremely favorable medium for the growth of the gonococcus. The symptoms of the urethritis may be slight and as weeks or months may elapse before the development of the more serious symptoms in the adnexa the association between the two phases of the disease may be lost.[10] The folds of the vulva, the glands of Bartholin, the deep Skene's, the ducts of the cervical glands, the ovaries and the mucous lined frills and fringes of the Fallopian tubes and the accessible pelvic peritoneum are fertile fields for the infection.

Gonorrhea is a disease of man, is not found in animals and the organism grows with difficulty in the laboratory except on media made with human secretions. There exists no immunity to it, either racial, individual or that conferred by previous attacks. Its most discouraging and treacherous aspect is its power to remain latent in the human tissues only to be stimulated to acute activity by changes in the circulation of the surrounding tissues as are brought about by menstruation, abortion, childbirth, pelvic surgery and sexual activity. The infection may be latent in a man and spring into activity upon being transferred to his partner where because of the physiological processes enumerated it finds conditions more favorable to its growth.

In a paper so short it is impossible to take up the necessity for 1. spinal puncture on all syphilities, the 2. tremendous mortality and morbidity from cardiovascular disease of syphilitic origin, the 3. highly disabling complications of both diseases which lessen the earning capacity of the individual and frequently make him a

public charge, the 4. number of general paretics admitted to our rapidly growing insane population, the 5. necessity for an annual physical examination in all treated patients, the 6. dangers of too little treatment, the 7. unfortunate reactions in some individuals sensitive to the drugs, and last 8. but not least the necessity for properly controlled advertising by the medical society and the Public Health Department to offset the commercial institutions which aim to treat venereal disease and make money at the same time.

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SOME OF THE OBSTETRICAL PROBLEMS OF THE COUNTRY DOCTOR*

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It is not within the province of this paper to enter into a full and scientific discussion of all the problems encountered by the physician doing obstetrics in the country home. My purpose is to review some of the literature pertaining to some of the more important problems, and to develop a working basis by which the country Doctor can formulate a definite policy for the solution of some of his more perplexing problems.

Prenatal care, important as it is, is a much neglected practice in the country. Yet, there is no field in preventive medicine where so much can be done to save human life and misery. The general practitioner imagines he knows his patients too well. He lacks that enthusiasm required to teach his patients the real importance of this work. Lack of interest on the part of the physician causes neglect on the part of the patient. The physician must either sell preventive medicine to the patient or the patient will sell a hard luck story to the doctor. Twice in the last year I have been called by patients in labor at full term who had never consulted a physician. If obstetric practice in the country is raised to the high level to which it belongs, the pregnant woman must receive far better prenatal care. Prenatal care endeavors to prevent the complications of labor and to separate the normal case from the abnormal one, if possible, before labor begins.

The question, "should the patient go to the hospital?" should be considered from every angle and determined on the merits of facts bearing on that particular case. The dead beat patient with easy normal labor may go to the hospital because she thinks it is an institution built by the rich for the benefit of the poor, with no intention of paying either the hospital or the doctor. We do not advise all cases to go to the hospital, yet refuse to care for some unless they do go. The strictly aseptic care of the normal case in the home, may sometimes be difficult, but never impossible. Far too often the complicated obstetrical case is sent to the hospital and referred to the general surgeon who is interested almost entirely in surgery and knows little or nothing about good obstetrical technic. To him, cesarean section may be the easy way out, although not always best for the patient. It was with intense interest and much concern that we read Doctor DeLee's article in the Journal A. M. A. of January 6, 1933. In which, he said; that women are safer from infection in home, than in the general hospital.

The greatest achievement of prenatal care is in the prevention of eclampsia, yet eclampsia remains the most important problem in obstetrics. The treatment of this malady has always varied from the very radical early emptying of the uterus, to the very conservative medical management. In the last few years the trend of current literature is decidedly toward the conservative treatment. For the country doctor, the management of this condition as outlined by J. O. Arnold and Temple Fay in the 1932, August, number of Surgery, Gynecology and Obstetrics, is the most rational and adaptable, and gives promise of improved results. This treatment is based on the assumption that

*Read before Secretaries Conference, at Peoria, May 16, 1933.

eclampsia is the result of improper water balance and edema of the brain. Sedatives are given to control the convulsions, and hypertonic glucose solution given intravenously attracts the tissue bound water to the blood stream. Saline purge withdraws the fluid from the blood stream, and cerebral dehydration is accomplished by spinal puncture when necessary.

The most troublesome complication encountered in obstetrical practice is the vertix occipito-posterio position. Doctor Morris W. Vaux has said that this abnormality and the involved mechanism is the most misunderstood and badly handled complication of labor. He frankly admits an occasional error in diagnosis of the condition in his clinic.

That it is an unsolved problem in country practice there is tragic evidence. The proper management of this complication often taxes the skill of the most expert obstetrician. It behooves the country doctor to have a definite policy in mind, a plan of treatment with which he is familiar, and a technic which he can execute with safety. In the aged primipera where the bag of waters ruptures early, cesarean section is indicated.

At least 90 to 95% of the cases of occipitoposterior position will either rotate anteriorly or deliver spontaneously with face to the pubis if given sufficient time. It is not good practice to allow the woman to labor more than one hour or two hours at the most in the second stage of labor, unless she is making definite progress. If the head is above the brim of the pelvis, podalic version and extraction should be done. If the head is in the pelvis, I prefer manual rotation by the method described by Danforth. Rotation with forceps works well in the hands of some operators.

Now there is one problem I wish to present. What can the County Medical Society do to improve the practice of obstetrics in the country? In order to present this problem a little better I am quoting extensively from a general discussion by Doctor Arthur H. Bill.

GENERAL DISCUSSION BY ARTHUR H. BILL
CLEVELAND

"The vertex occipitoposterior position has always been the most troublesome complication encountered in obstetric practice. It is a complication which has been met with great indecision on the part of the practitioner and one in which the results both for mother and baby have been in a considerable percentage of cases thoroughly unsatisfactory.

"Not only have the suffering of the patient and the general fatigue following labor been unnecessarily great but there has been associated with the deliveries a considerable amount of maternal morbidity and fetal mortality. That the problem is still unsettled in the minds of a large part of the profession there is ample evidence in the literature which from time to time suggests various new methods of conducting such cases. There seems to be the greatest confusion both as to the general policy of meeting this complication and the technic to be used when intervention is resorted to. As a rule descriptions of methods in text-books and medical journals are very unsatisfactory and confusing and it is no wonder that the physician who conducts labor finds himself so at a loss to know the best method to use, that he is content to adopt the policy of watchful waiting as perhaps the safest one in his own hands.

"We have not found the occipitoposterior position to be a complication as difficult to manage as seems to be the general experience. In fact we believe that we have been able to care for these cases in such a way as to make them seem fairly simple in the vast majority of instances. I am, therefore, concerned with the question of why, there is such general difficulty in managing the occipitoposterior position.

"In the first place the most confusing teaching already mentioned is a considerable factor; and the fact that there seems to be no definite policy. In a discussion of a given obstetrical procedure which has been presented at a medical meeting, one often hears the statement that the procedure may be a good one and permissible in the hands of a specialist, but that it would be wrong to advocate such a thing in general practice because the general practitioner would bungle it and the results would be disastrous. In other words, we admit the value of the procedure but would deny the patient the benefit of it because it could not be carried out by every practitioner of medicine. Instead of attempting to raise the standard of obstetrics and bring medical education up to the standard we are keeping the standards of an important specialty down to the level of inadequate training. Such a thing would of course, not be tolerated in any other branch of medicine.

"Whether a physician practicing obstetrics feels competent to perform an approved operation or not he should know the value of the operation and the appropriate time in the labor when it should be performed. If in his judgment the operation is beyond the realm of his experience it is usually possible for him to obtain help from someone who has devoted more time and thought to such cases and he should do so and thereby give his patient the benefit of such consultation. It is a wise physician who knows and admits his own limitations in the practice of obstetrics. In obstetrics more than in any other medical speciality it seems that consultation is sought as a last resort and often the consultant finds himself in the position of meeting a difficult situation which has developed either from too long waiting or from interference on the part of the attending physician and is not able to attain satis-

factory results whereas if he had been able to manage this case earlier he might have found a comparatively simple situation and accomplished an easy delivery. Too great delay in delivering a baby may complicate the delivery because of the fact that the uterus may become tonically contracted, so much so as to interfere with the procedure of choice or the delivery may be performed at a time when the failing fetal heart and passage of meconium show that the baby is in such a condition that it cannot survive the delivery; and postpartum hemorrhage may occur as a result of uterine fatigue.

"The second consideration is the failure to make a diagnosis. It is no doubt true that a very large number of vertex occipitoposterior positions are not diagnosed. The diagnosis is somewhat more difficult than the diagnosis of any anterior position. This difficulty is due chiefly to the fact that the head is somewhat extended in all such cases and therefore the posterior fontanelle upon which one depends to a large extent in determining the position of the head, lies so far back and so high that it is not reached by vaginal examination. If the physician would realize that there is this extension of the head in posterior positions and when on examination he feels only the anterior fontanelle would follow the sagittal suture as far posteriorly as possible, he would in most cases be able to palpate the posterior fontanelle and therefrom make his diagnosis. In many cases the physician attempts to perform a forceps delivery without making a diagnosis of position, and of course, applies the forceps blindly, and makes traction upon the head which is in an abnormal position; usually with little success. I believe that no physician has a right to make traction with forceps in any case unless he knows the position of the head and therefore is sure that he has applied the forceps correctly.

"Third: Failure is sometimes dependent upon the first stage of labor. In cases of posterior position the first stage of labor is usually prolonged, and if the patient is not given sufficient analgesia or anesthesia to relive pain the physician is apt to yield to the appeal of the patient or her relatives to deliver the baby at a time when the cervix is still resistant. Attempts to deliver through an undilated and resistant cervix have undoubtedly resulted in the deaths of many babies. The solution to this lies in the administration of sufficient anesthesia to make the patient oblivious of what is going on. In this way it is usually possible to allow the labor to progress until there is full dilatation of the cervix.

"When the head which lies in a posterior position will not rotate and will not descend under the force of strong second stage pains, the administration of drugs to stimulate uterine contraction, such as a pituitary preparation or the application of an extremely tight abdominal belt seems to add insult to injury, and only makes dangerous pressure upon the head of the child which may be already in distress. It is not fair to the child to allow its head to be subjected to such unreasonable pressure when it is easily possible to correct the abnormality of position.

"When the diagnosis of a posterior position is made and it is found that after a sufficient delay in the second stage of labor no progress is made, operative interference becomes necessary. Of the numerous operative procedures which are employed in these cases a few should be discussed briefly.

"The method of attempting to deliver the head in the posterior position must be condemned because the only reason why the head did not descend spontaneously was because of this same posterior position. Such attempts to deliver do not make the head follow the normal mechanism of labor and the force required to deliver the head while still in this position should be considered entirely unjustified. It is our rule never to make traction upon the head when in a posterior position but always to consider such a position as an abnormality to be corrected. The same reasoning would apply to the policy sometimes advocated of drawing the head down to a lower level of the pelvis and then rotating it with forceps. We must realize that the greatest amount of force would be necessary and therefore the greatest amount of damage would be done during the traction which would bring the head down to the pelvic floor. The abnormality of position should be corrected at the pelvic plane in which the head is found. The procedure of making traction and rotation of the head at the same time must be condemned on account of the possibility of damage to the birth canal caused by the twisting or spiral movement.

"Manual rotation of the head has apparently been successful in the hands of some obstetricians. The greatest objection to manual rotation lies in the fact that the fetal head must be considerably displaced to a higher pelvic level when it is grasped by the whole hand inserted in the vagina, and the fact that it is very apt to return to its posterior position before forceps may be applied unless the scalp is caught by a vulsellum forceps—an unsatisfactory procedure.

"At the Cleveland Maternity Hospital we have a very definite policy of handling the occipitoposterior position. There is no interference in the first stage of labor except in cases of emergency. By practically abolishing pain it is usually possible to allow normal progress until full dilatation is obtained. In the second stage of labor there is early interference. We do not feel that an occipitoposterior position is per se an indication for operative delivery. In a certain number of cases the head will rotate easily in the second stage of labor, but we believe that it is perfectly possible to tell in a given case whether the head will rotate promptly or, if at all, only after hours of hard labor. It should be possible to make this decision in at least one hour of second stage labor. The results of delay may be bad, for delivery methods are more easily carried out when early interference is resorted to, than after the uterus has become more tonically contracted or after the head has become impacted, in the pelvic cavity.

"If the head is above the pelvic brim or in the brim, podalic version is the procedure of choice. This practically eliminates the use of the high forceps, the only exception being an occasional case in which due to prolonged labor the uterus is so tonically contracted that it does not relax sufficiently under the anesthetic to

make a version seem a safe procedure. In these cases which should be very rare, the delivery is accomplished by forceps rotation in the same manner in which the head is in the pelvic cavity.

"In cases in which the head has passed the pelvic brim, forceps rotation is performed as follows: The solid blade forceps are used because the application is more easily made than with the fenestrated blades and is therefore usually more accurate, and rotation of the head is more easily accomplished due to the smoothness of the blades. The pelvic curve of the forceps instead of complicating the rotation as is sometimes thought, really facilitates it when the proper technique is carried out. We find no advantage in straight forceps such as the Kielland."

country doctor by way of the County Medical Society in the form of pediatric clinics.

If the family doctor is to be saved to the medical profession he must follow more closely the advancement made by the leaders of his profession and take a much more active part in the affairs of his County Medical Society. If the medical profession is to be saved from contract or state medicine it will be through more active cooperation with the County Society in carrying out a very definite program of instruction along both scientific and economic lines.

		Edinburgh Royal Maternity Douglas Miller			Private Cases W. C. Danforth			Cleveland Maternity S. M. Dodek			Cleveland Private Cases A. H. Bill		
		Deaths			Deaths			Deaths			Deaths		
		No.	M.	C.	No.	M.	C.	No.	M.	C.	No.	M.	C.
Head above or arrested at pelvic brim	Spon. rotation-spon. delivery	423		7	83			1		1			
	Spon. delivery-face to pubes	88		8	5		1						
	Spon. rotation-forceps delivery	51		6	104			147		1			
	Manual rotation-spon. delivery	13/19		1/2									
	Manual rotation-forceps delivery	16		3	76			5					
	Podalic version-extraction	12	1	9	17			59	1	8	317		4
	Forceps rot. and del.-mod. scanzoni	15		1				1			34		1
Head below pelvic brim	Manual rotation-forceps delivery	59		6				7					
	Forceps rotation-forceps delivery	36	2	7				221	1	8	89		
	Transverse arrest-forceps one							54		3			
	Forceps delivery-face to pubes	18		3 *				1		1			
	Craniotomy	2/8		2/8									
Cesarean Section	Complicated persistent O. P.							12		1	11		
	Uncomplicated persistent O. P.							6					
		747	3	63	285		1	514	2	23	500		10
				8.4%						4.4%			2%

In reviewing the literature on this subject I made a chart showing the termination of these cases. It shows the advantage of having a definite policy and plan of management, and that it makes but little difference which method is used, so long as the operator is master of the method.

There is a movement started to bring the advancements made in pediatries direct to the

In the manual rotation-spontaneous delivery there were 13 cases above the brim of the pelvis and 19 below. One child died in the cases above and two below. In the craniotomy cases two were above the brim of the pelvis and eight below.

DISCUSSION

Dr. Louis N. Tate, Galesburg: The obstetrical problem of the country doctor is a big subject. I think

Dr. Davis has handled this most admirably. One of the big problems is the element of time; the patient lives a long distance from the office. The patient on the farm feels that she cannot go into the office for prenatal care. That is a part of the element of time. If she would make more frequent visits to the office some serious difficulties might be prevented. Dr. Davis spoke of being called when he has not seen the patient until labor begins. He spoke of aseptic care in the home. It is hard to carry it out.

The prevention of eclampsia, the article by Arnold Fey in Surgery, Gynecology and Obstetrics, August, 1932, should be read by everyone as it is most valuable, showing the relation between the output and intake of fluids. The element of time also comes in when the doctor is on a case in the country, and is called to another place, or he feels he should be back at the office. He is out of reach of the telephone, and he feels that he ought to be elsewhere, so he sometimes does things too hastily. He may resort to high forceps which would do inestimable harm to the patient. The delivery of an eclamptic by dilatation and extraction, or induction of labor has produced a high mortality of 25 per cent. while in cesarean section the mortality may even be greater. We know the work of Strogonoff. From 1897 to 1924 in his clinic in a large series there was a mortality of 3.2 per cent. Conservative treatment is of great value in eclamptics.

Dr. Davis spoke of the great number of posterior occiputs. He also stated that a great number of rotations occur spontaneously. Personally, I think we should not delay too long in interference. Many times because of some element of time the doctor thinks he ought to do something and sometimes he does great harm.

My plea is that we should have more practical subjects in obstetrics in the county medical society meetings.

Dr. Andy Hall, Mt. Vernon: I was very much interested in Dr. Davis' paper. In 1931 as a result of diseases of pregnancy, childbirth and the puerperal state 639 deaths occurred in Illinois. It may be of some interest to give you the specific cause of these deaths as tabulated from the records of the Department of Public Health. They were as follows:

Abortion with septic conditions	83
Abortion without mention of septic conditions (to include hemorrhages)	21
Ectopic gestation with septic conditions specified	9
Ectopic gestation without mention of septic conditions	48
Other accidents of pregnancy (not to include hemorrhages)	10
Placenta previa	18
Other puerperal hemorrhages	41
Puerperal septicemia and pyemia	124
Puerperal albuminuria and eclampsia	128
Other toxemias of pregnancy	20
Puerperal phlegmasia alba dolens, embolus sudden death (not specified as septic)	35
Cesarean operation	49
Other accidents of childbirth	49
Other and unspecified conditions of the puerperal state	4
Total	639

In looking over the deaths from cesarean operations I note that almost as many were reported from Chicago as down state. Hence I presume that the operators down state are just about as skillful as those in Chicago.

Another interesting piece of information came to me some time ago in talking with the Director of Public Health from Pennsylvania. He said that in certain counties in his state where many mothers were attended by midwives, the maternal mortality was less than where they were attended by physicians. I requested him to send me his statistics on this subject and his rules governing the midwives, and he did.

No midwife is permitted to carry any drugs in her kit, except soap, antiseptics, nitrate of silver solution, laxatives and fluid extract of ergot. They are not permitted to give any drug internally except laxatives, and the fluid extract of ergot can be given only after the uterus is emptied. They are not permitted to use forceps or other instrumental means of delivery. In every case where there is a complication they must call a physician. But in complicated cases where a physician has been called, regardless of the outcome the case is charged up against the midwife. According to the Pennsylvania statistics in 1931, in ten counties in that state, 3,669 women were attended by midwives. Of this number 171 were complicated cases. Only three deaths of mothers were reported in the entire list. No cesarean operation was reported.

If there is any lesson taught in these statistics, I am ready to believe that we would have less maternal mortality if we would permit more mothers to deliver their babies themselves, rather than for us to get in too big a hurry, forcibly dilate the cervix, give pituitrin, ergot, and hasten delivery by the use of forceps.

THE SOCIALIZATION OF MEDICINE

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The history of medicine from the days of Aesculapius to the present is a record of brilliant deeds executed by heroic men, all actuated by the noblest of motives,—the healing of the sick and the prolongation of life. The self sacrificing and sympathetic type of physician was the inspiration of the artist, Luke Fildes, in his masterpiece "The Doctor," the original of which adorns the walls of the Tate Galleries in London.

There is no more beautiful or perfect description of the old time doctor, the family doctor of the early days, than Ian Mac Laren's truthful delineation in "The Doctor of the Old School." He was a leader of men. He was loved because of his simplicity, integrity and medical lore. His influence for good permeated every walk of life. With the changing world, however,

new styles, different manners and a new type of medical man has arisen, one whose views and ideas are consonant with the times. As in the business world the tendency has been in the direction of concentration of wealth through corporations and trusts, so in medicine today we have a leaning toward combinations. Medical men in a certain community form groups endeavoring to include in their personnel experts in the various specialties and laboratory technicians. The practice is carried on according to strict business principles. The success of the small group practice of medicine has led to the formation of larger groups financially backed by large endowments, either as an integral part of one of the larger universities or the pet scheme of some great foundation. The family doctor who is trying to eke out a livelihood in the neighborhood of one of these pay clinics finds the going extremely difficult. His fees cannot stand the sharp competition of clinical charges and his equipment suffers when compared to the eleborate fittings of the costly clinic.

We have the sorry spectacle in this city of one of our large endowed Universities opening up a complete and attractive pay clinic. It is in keen competition with many of its old medical graduates who little suspected when they graduated from their Alma Mater that in the years to come she would be their keenest competitor. Lay organizations, fully aware of the large returns to be obtained from medical practice especially through the medium of extensive advertising in the daily papers, have formed groups among the young and inexperienced physicians and have carried on a big business unmindful of the ethics of organized medicine.

One large clinic or Institute in this city was and still is sponsored by some of the leading business men who allowed their names to be used for advertising purposes even though they were fully informed that such an organization was without the pale and had no standing in the organized medical profession.

Much can be said in favor of group practice when ethical physicians combine to divide the cost of equipment and upkeep and give to the patient at lowered cost a complete diagnosis and the best of treatment. Another cloud that has been hovering over the physicians for the past few years is the threat of State Medicine or as it is sometimes termed, Socialization of Medicine. We look with horror at the prospect of State Medicine becoming established because we are reminded of the failure of State Medicine where it has been in vogue in foreign countries and where it has resulted in detriment to the physician and loss to the patient. What is State Medicine? During the meeting of the American Medical Association at St. Louis in 1922, the following definition of "State Medicine" was accepted: "State Medicine" is hereby defined to be any form of medical treatment provided, conducted, controlled or subsidized by the federal or any state government or municipality, excepting such service as is provided by the Army, Navy or Public Health Service, and that which is necessary for the treatment of mental diseases, the treatment of the indigent sick and such other service as may be approved by and administered under the direction of or by a local county medical society and is not disapproved of by the State Medical Society of which it is a component part."

What will State Medicine accomplish for the doctor and what benefit will it be to the public? To answer these questions satisfactorily, let us glance at the results of State Medicine as it has been in operation in certain foreign countries.

The panel system in England, a form of state medicine which was introduced into Parliament by Lloyd George about fifteen years ago, will give us a fair idea of the effect of state medicine upon the medical profession and upon the public. The doctor who receives a fixed salary from the state, small though it may be, is like the politician or the state institute employee. His diagnosis and treatment become a matter of routine and that deep personal interest which the private physician always has in his patient disappears in his anxiety to complete the allotted work of the day. State Medicine has lowered the standard of medicine in England. The system assures the English working man a bottle of medicine whenever he may need or desire it, but it does not give him a thorough examination and individualized treatment by physicians who have a special interest in his case. It seems that the English patient must have his bottle of medicine. The late Sir Frederick Treves, a famous surgeon once said, "The craving for bottles of medicine in this country (England) is second only to the craving for

drink." Those who have been in England can appreciate the appropriateness of this comparison. As a result of the panel system the public has not been benefited because they have received an inferior grade of medical attention. Surely the physician has not been benefited because, although he has received a fixed salary which is hardly commensurate with his needs, he feels that he is just a state employee, and that his freedom to do all that he possibly can for his patient is hampered. There is a socialistic trend throughout most of the European countries and, as a consequence, medical practice is under state or government control. In France the government has been under socialistic influence for many years and the medical profession has been obliged to defend itself against unjust laws that are so easy to incorporate and so hard to eradicate. In France it is left to the "Syndicats Medicale" to protect the doctors' interests in any controversies over medical service to the insured. The insurance law is applied compulsorily to all employees of both sexes less than sixty years of age who earn not more than $600 per annum. The law in France is a little more liberal than in other countries for although all legally qualified practitioners of medicine may enroll for insurance practice, no physician is compelled to accept such service. We have no better example of state controlled medical practice than that which exists in Germany today and which has been in operation since 1883 when it was introduced into that country by Bismarck. Germany and Austria have always shown a strong leaning toward socialism and socialistic tendency. It is not surprising since almost every industry and most educational activities in Germany are under government control, that medical science in its teaching and practice would be dominated by that influence.

The effect of this socialistic influence upon the public health and especially upon the medical profession is worthy of consideration. In Germany and other European countries where lay domination and political control prevail there has been a steady decline in medical service. Among the workers there has been an increase in the loss of time from sickness and there is a greater amount of sickness than there is among the workers in America. In Germany the average number of days of sickness per insured workman was 5.9 days per year in 1885, while in 1913 it had increased to 9.19. In Austria the increase from 1890 to 1913 was from 8 to 9.45 days.

In the United States where medicine is comparatively free from lay domination and control, the average loss from sickness for the American workman is 6.5 days. Statistics also show that the mortality rate is higher in those countries where medical service is under lay control.

After reviewing the effects of socialized medicine in foreign countries upon medical service to the public and upon the morale and standard of the medical profession, I feel safe in predicting that compulsory insurance or state medicine would not be beneficial either to the American public or the medical profession. The American people are liberty-loving and independent and anything that savors of force or compulsion, like the noble experiment of prohibition, stirs up a wave of resentment. The American physician likes freedom of action. He should not be hampered by lay inspired laws from pursuing scientific experiments intended for the public good. Public health service and all medical direction should be in the hands of medical men. The American Medical Association, the state and local county societies are amply supplied with intelligence to properly care for the health of the community. The less there is of lay or political influence in matters of health and the sooner the physician is restored to his rightful position of honor and respect, the better will be the health and happiness of all concerned.

In conclusion, my feeling on this question is best expressed in the words of "Hogarth." "I do not think you will make the doctor a better medical man by making him more of a civil servant and less of a doctor; for there is something inherent in officialdom which freezes the genial current of the soul, and thaw it as you will by whatever new principles of kindliness and mercy it can never be thawed right out."

25 E. Washington St.

Josh Harper says—"Hard times agree with some people. I feel twenty years younger, financially."

Society Proceedings

MADISON COUNTY

The Madison County Medical Society were guests of Dr. J. C. Stewart, Managing Officer of the Alton State Hospital, August 4, 1933. Dr. W. W. Eichelberger, Assistant Managing Officer, read a paper entitled "Psychiatry and the General Practitioner."

Dr. W. W. Brown, Collinsville, who took over the practice of the late Dr. G. H. R. Schroeppel, was elected to membership.

The September meeting of the Society will be held at Highland at which time Doctors Ralph Kinsella and William Coghlan of St. Louis University School of Medicine will present the subject of "Goiter."

Dr. John S. Patterson has moved from Bethalto to Staunton, Macoupin County.

The Madison County Medical Society, through its Tuberculosis Association, has just put on a campaign which resulted in the electorate voting to continue the operation of the Madison County Tuberculosis Sanitarium for another five years.

D. D. Monroe, M. D.,
Superintendent.

Marriages

Arthur Norden Bolz, Walnut, Ill., to Miss Marjorie Claire Muesse of Erie, June 18.

Gordon Maxwell Perisho, to Miss Mirriam Ann Holderman, both of Morris, Ill., August 12.

Knut Reuterskiold, Chicago to Dr. Virginia Jackola of Polo, Ill., June 17.

Manuel Spiegel, Chicago, to Miss Janice Gottlieb of Kenosha, Wis., June 17.

Personals

Speakers at the one-day course in pediatrics held in Monmouth, July 28, for physicians of Warren County and guests from eastern Iowa and western Illinois, under the auspices of the American Academy of Pediatrics, were:

Dr. Heyworth N. Sanford, Chicago, Infant Feeding.

Dr. Bert I. Beverly, Chicago, Behavior Disturbances.

Dr. Charles K. Stulik, Chicago, General Treatment of Children.

Dr. Arthur H. Parmelee, Oak Park, Care of the New-Born.

Dr. Woodruff L. Crawford, Rockford, Allergy.

Dr. Robert H. Graham, Aurora, Preventive Medicine.

Dr. Clifford G. Grulee, Chicago, secretary of the American Academy of Pediatries, conducted a "question box."

The Chicago Medical Society recently sponsored the following series of health lectures in the Hall of Science at the Century of Progress Exposition:

July 31, Dr. Philip Lewin, Infantile Paralysis.

August 2, Dr. John A. Wolfer, Cancer of the Breast.

August 3, Dr. Gilbert Fitzpatrick, Cancer.

August 5, Dr. George B. Lake, Mental Hygiene.

August 7, Dr. Fremont A. Chandler, The Crippled Child.

August 9, Dr. Clifford J. Barborka, Diet in Health and Disease.

August 10, Dr. Francis E. Senear, Care of the Skin.

August 12, Dr. Max Cutler, Cancer.

The bulletin of the society reports that 1,068 physicians have registered at its booth in the Hall of Science during June and July.

During one recent week the Chicago Medical Society sponsored the following lectures at the Century of Progress:

Monday, August 14—Elmer Kenyon—"Disorders of Speech."

Wednesday, August 16—S. M. Feinberg—"Hay Fever."

Thursday, August 17—Charles F. Read—"Mental Health."

Saturday, August 19—Hart E. Fisher—Demonstration of "Evolution of Resuscitation."

The following were sponsored by Municipal Tuberculosis Sanitarium:

Tuesday, August 15—Clara Jacobson—"Our Children and Tuberculosis—Open Window Rooms, Sunlight Treatment, Etc."

Friday, August 18—Harry H. Freilich—"The Fountains of Infection—The Municipal Home and Its Purpose."

The State of Illinois Industrial Commission announces the creation of a medical department, with Dr. Philip H. Kreuscher, Chicago, as director, and Drs. Edward H. Rategan and

Daniel E. Meany as examiners. The following list of consultants has also been announced:

General Surgery: Dr. Karl A. Meyer, Dr. John A. Wolfer, Dr. John B. O'Donoghue, Dr. Raymond W. McNealy.

Fractures and Traumatic Surgery: Dr. Paul B. Magnuson, Dr. Kellogg Speed, Dr. James J. Callahan.

Psychiatry and Neurology: Dr. Francis J. Gerty, Dr. Ralph C. Hamill, Dr. George W. Hall, Dr. Lewis J. Pollock.

General Medicine: Dr. Frederick Tice, Dr. Walter W. Hamburger, Dr. Charles A. Elliott, Dr. James H. Hutton.

Roentgen Ray: Dr. James T. Case, Dr. Maximilian J. Hubeny, Dr. Hollis E. Potter.

Eye Surgery: Dr. Harry S. Gradle, Dr. Austin A. Hayden, Dr. Leroy Thompson, Dr. Sidney Walker, Jr.

Dr. Eben J. Carey, director of medical exhibits at A Century of Progress, was appointed yesterday to be dean of the medical school of Marquette university, Milwaukee. He has been professor and head of the department of anatomy there since 1920.

Dr. Carey succeeds Dr. Bernard F. McGrath, who has been compelled to resign because of illness. Announcement of the change was made by the Rev. William M. Magee, S. J., president of Marquette, and the Rev. A. F. Behrens, S. J., regent of medicine.

The new Marquette medical dean is a Chicagoan. He was educated at the University of California, Creighton university, Omaha, and Rush Medical college, Chicago. He was the discoverer in Europe of the "transparent man," and brought his display to the World's Fair as part of the Mayo Brothers' clinic.

Dr. Peter C. Kronfeld, associate professor of ophthalmology, Division of Biological Sciences, University of Chicago, has resigned to accept a position as head of the department of ophthalmology at Peping Union Medical College, Peiping, China. Dr. Kronfeld was graduated from the University of Vienna Faculty of Medicine in 1923 and served for a time as assistant in the eye clinic there under Prof. Josef Muller. He came to the University of Chicago in 1928 as assistant professor of ophthalmology. He will leave about September 1 for Peiping, going by way of Vienna.

News Notes

—The Sangamon County Medical Society and the state department of health made free tuberculin tests and roentgen examinations on a number of children at the Illinois State Fair in Springfield, August 19-26. According to the state department of health, this project was undertaken as a demonstration of the use and value of the Mantoux skin test and the x-rays in the early diagnosis of tuberculosis. Children between 5 and 16 years old, whose parents or guardian requested it, were accepted for the test and examination.

—Three youths 17, 18 and 20 years old were sentenced to 100 years each in the penitentiary after a trial in the criminal court of Chicago, August 14, at which they pleaded guilty of the murder of Dr. Bernard F. Garnitz last February. Dr. Garnitz was called from his home on the pretense of an emergency case. He drove to the address given, an empty apartment, and was met by the armed youths, who held him up and shot him in the side. He died, March 11. The length of the sentence for this crime sets a record in the criminal court. Judge Epstein in passing sentence, said: "The testimony in this case shows these defendants to be persons of malignant heart. To impose any sentence other than one which would make it impossible for them to ever become a menace to society would be unthinkable." The Chicago Medical Society kept a close watch on this case, which has been in the courts for seven months. About seventy-five members of the society, including the president, Dr. Austin A. Hayden, the president-elect, Dr. Charles H. Phifer, the secretary, Dr. Thomas P. Foley, and Dr. Julius H. Hess of the board of trustees, were present at the trial. For some months previous to this murder several physicians had been robbed after being lured from home on fake calls and in several cases had been fired upon when they did not respond quickly enough to the demands of the gang.

—The International Assembly of the Inter-State Postgraduate Medical Association of North America will be held in the Public Aud-

itorium, Cleveland, Ohio, October 16-20, 1933. Many distinguished teachers and clinicians will appear on the program. A major list of the names of the contributors to the program, with other information, appears on page 221 of this Journal. All members of Illinois State Medical Society are cordially invited to attend. Registration fee of $5.00 admits all members of the profession in good standing.

—A report has been received that a man named Joseph Diamond has been seeking money fraudulently for a so-called credit and collection agency. This person has been obtaining money on orders for physicians' bags, instruments and other equipment from Chicago physicians, internes and students without delivering the goods. He is said to have been recently discharged from the Sharp and Smith Surgical Supply Company for dishonesty and is said to have an extensive criminal record. He is described as being about 5 feet 10 inches tall, slender, with black hair, dark skin, prominent brown eyes and a prominent nose.

—Dr. H. H. Lamb of Davenport was elected president of the Illinois-Iowa Central District Medical association at the annual meeting of the organization held recently at the Davenport Outing club. Dr. Lamb succeeds Dr. H. A. Beam of Moline.

Other officers named were:

Vice president—Dr. Karl Wahlberg, Moline.

Secretary—Dr. John Marker, Davenport.

Treasurer—Dr. J. H. Fowler, East Moline.

A dinner and reception honoring Dr. Walter Biering of Des Moines a native of Davenport who was recently elected president of the American Medical association, was held at the Outing club last night.

Dr. G. F. Harkness, of Davenport, president of the Iowa Medical association, acted as toastmaster. In addition to the quad-city doctors, physicins were present from Kewanee, Muscatine, Clinton, Geneseo and Cedar Rapids.

Among the speakers were Dr. Vilray Blair of St. Louis, Dr. J. H. Mitchell, Dr. Bulah Kushman and Dr. Edward Davis, all of Chicago.

Deaths

J. Rowe Bemisderfer, Steger, Ill.; College of Physicians and Surgeons, Baltimore, 1883; aged 76; died July 27, of coronary thrombosis.

John F. Blankenship, Havana, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1890; aged 75; died July 19, in Forest City, of chronic myocarditis.

Charles E. Boynton, Chicago; Hahnemann Medical College and Hospital, Chicago, 1891; member of the Illinois State Medical Society; aged 73; died, July 20, of injuries received when struck by an automobile.

Leon George Brackett, Waukegan, Ill.; Chicago College of Medicine and Surgery, 1917; member of the Illinois State Medical Society; served during the World War; on the staff of the Lake County General Hospital; aged 47; died, July 19, in the Barnes Hospital, St. Louis, of cancer of the mediastinum.

Telesphore E. Caron, Kankakee, Ill.; Laval University, Faculty of Medicine, Montreal, 1891; a Fellow A. M. A. and practitioner in Kankakee for 38 years; aged 68; died, August 17, of carcinoma.

Augustine Ben Childs, Keithsburg, Ill.; Rush Medical College, Chicago, 1908; served during the World War; aged 52; died, May 28, in Evanston, of hypertension.

William F. Dickson, Chicago; Medical Faculty of Trinity University, Toronto, 1882; a Fellow, A. M. A. a practitioner for 50 years and former president of Illinois St. Andrew's Society; aged 75; died, August 26, of chronic myocarditis.

John Milton Dodson, Chicago; Rush Medical, 1882; Jefferson Medical College, 1883; retired, aged 74; died at his home, August 15, of uremia. Dr. Dodson became demonstrator of anatomy in Rush in 1889; professor of physiology in 1891; professor of diseases of children in 1898; dean of Rush and dean of medical students in the University of Chicago, 1898-1923; executive secretary of the Bureau of Health and Public Instruction of the American Medical Association, and on editorial staff of *Hygeia*, 1923.

At one time president of Chicago Pediatric Society and Chicago Pathological Society and trustee of Chicago Medical Society. During the World War he was medi-

cal advisor to the governor of Illinois and Major in Army Medical Corps. He was a member of the American Association of Anatomists and the American Association for the Advancement of Science.

Dr. Dodson had a very wide acquaintance among professional people throughout the country and was highly esteemed for his fine social qualities as well as for his precise scientific attainments.

WILLIAM JOSEPH EGAN, Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1905; a Fellow, A. M. A.; on the staff of St. Bernard's Hospital; aged 58, died, July 7, of cerebral hemorrhage.

JOHN MICHAEL FITZPATRICK, Chicago; Loyola University School of Medicine, Chicago, 1919; aged 49; died, June 28, in a hospital at Detroit, of generalized peritonitis.

JAMES LEE FUNKHOUSER, Danville, Ill.; Medical College of Indiana, Indianapolis, 1905; a Fellow, A. M. A. and urologist; consultant at the veterans home hospital and on staff of St. Elizabeth and Lake View hospitals; aged 50; died, August 11, from an accidental gunshot wound, self inflicted.

RAPHAEL B. GREEN, Chicago; Chicago Medical School, 1918; a Fellow, A. M. A., aged 50; died, July 26, at West Side hospital, of coronary thrombosis shortly after operating on a patient.

OSCAR JARRELL HAGEBUSH, Ashley, Ill.; Washington University School of Medicine, St. Louis, 1901; a Fellow A. M. A. and former managing officer of Anna state hospital; aged 55; died, August 6.

LESLIE BURRITT JOSLYN, Maywood, Ill.; Northwestern University Medical School Chicago, 1910; a Fellow, A. M. A.; senior surgeon in Westlake hospital, Melrose Park; aged 47; died, August 18, following a crash at Elmhurst airport. Dr. Joslyn had recently been licensed as a private pilot and was returning from a trip to Marengo when the accident occurred.

MYRON A. MARTIN, Chicago; Chicago Physio-Medical College, 1898; aged 64; died, July 12, of carbon monoxide poisoning, self-administered.

GEORGE HENRY MOORE, Aledo, Ill.; St. Louis University School of Medicine, 1904; a Fellow, A. M. A., and president of Mercer County Medical Society; aged 62; died, July 26, in Mercy hospital, Davenport, Iowa, from cerebral hemorrhage.

AEBINA M. P. NORRIS, Riverside, Ill.; Hering Medical College, 1895; aged 56; died, July 22, in Martha Washington hospital, of chronic myocarditis.

ARTHUR BENNETT RANKIN, Chicago; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1906; formerly instructor of orthopedic surgery, Northwestern University Medical School, professor and head of the department of anatomy, and associate professor of surgery, Loyola University School of Medicine; served with the Canadian Army during the World War; on the staffs of the Woodlawn, St. Bernard's, Illinois Central and Washington Park Community hospitals; attending surgeon to the Cook County Hospital, 1916-1918; aged 50; died, July 24, of coronary thrombosis.

ALLEN SALTER, Lena, Ill.; University of Illinois College of Medicine, 1893; a Fellow, A. M. A.; aged 69; died, in Freeport, April 22.

EDWARD JACOB STONE, Chicago; Rush Medical College, 1921; a Fellow, A. M. A.; aged 38; died, August 7, of chronic myocarditis.

HENRY CLYDE TELFORD, Ottawa, Ill.; University of Michigan, Homeopathic Medical School, 1905; aged 61; died, June 22, following an operation at Ryburn-King Memorial hospital.

JOHN A. TRAIN, Chicago; University of Illinois College of Medicne, 1891; a Fellow, A. M. A.; aged 64; died, August 1, of cerebral hemorrhage.

WELLER VAN HOOK, Chicago; University of Illinois College of Medicine, 1885; a Fellow, A. M. A.; former professor of surgery at Northwestern University, historian and author of works on philosophy; aged 71; died, June 30, of cerebral hemorrhage, at his farm near Coopersville, Mich.

CYRILLE VERMEREN, Chicago; National Medical University, Chicago, 1898; Belgian consul general; was awarded the Cross of Officer of the Order of Leopold; aged 69; died, July 23, of carcinoma of the descending colon.

WILLIAM JOHN WULSTEIN, Ashton, Ill.; Hahnemann College and Hospital, Chicago, 1903; aged 63; died in the Methodist hospital, Peoria, August 12.

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